Model CVR700

A/V DOLBY DIGITAL RECEIVER/DVD PLAYER

Cinema Vision™ System

Service Manual

JBL
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DOLBY DIGITALEX
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DIGITAL AUDIO
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Woodbury, New York 11797

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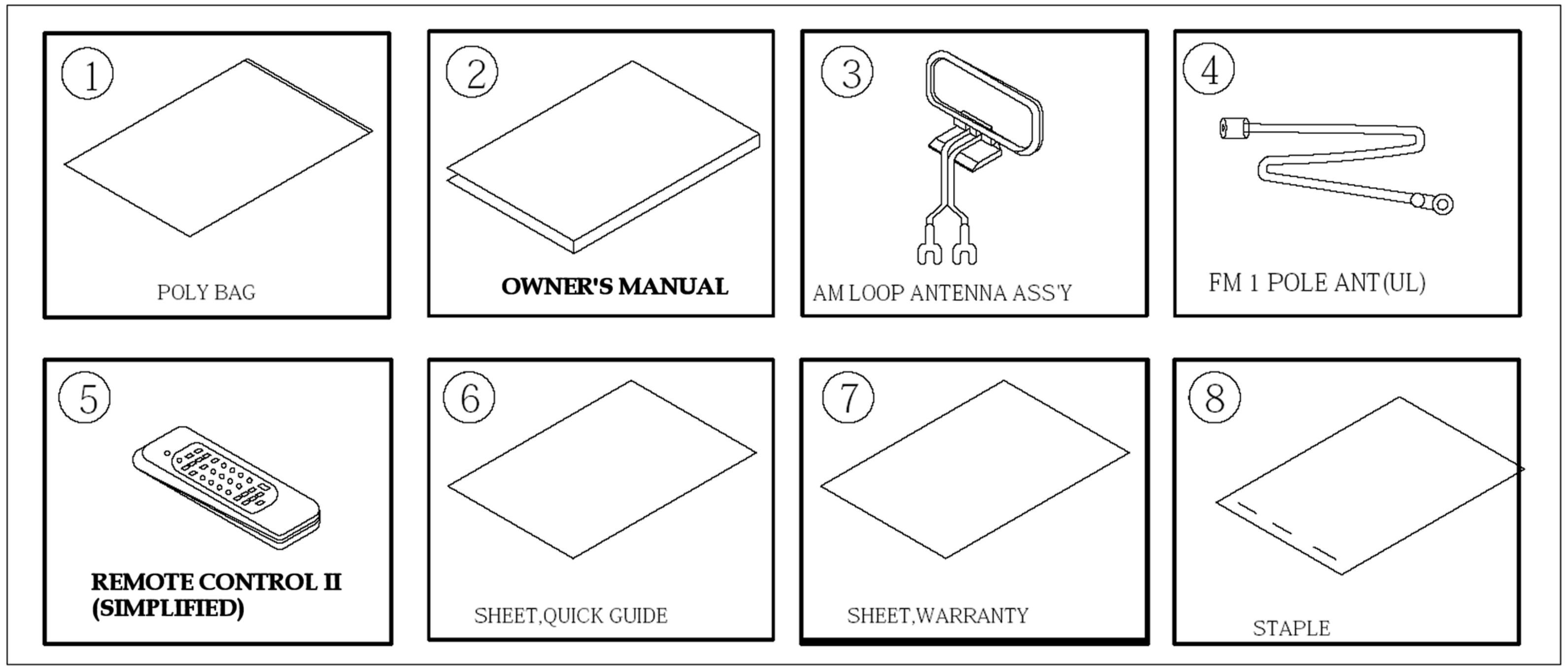
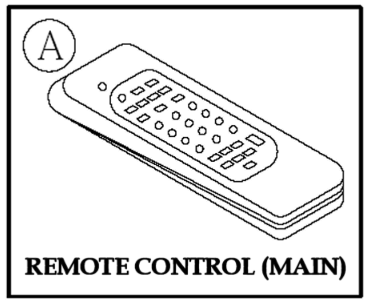
Instruction manual ass'y - Accessories

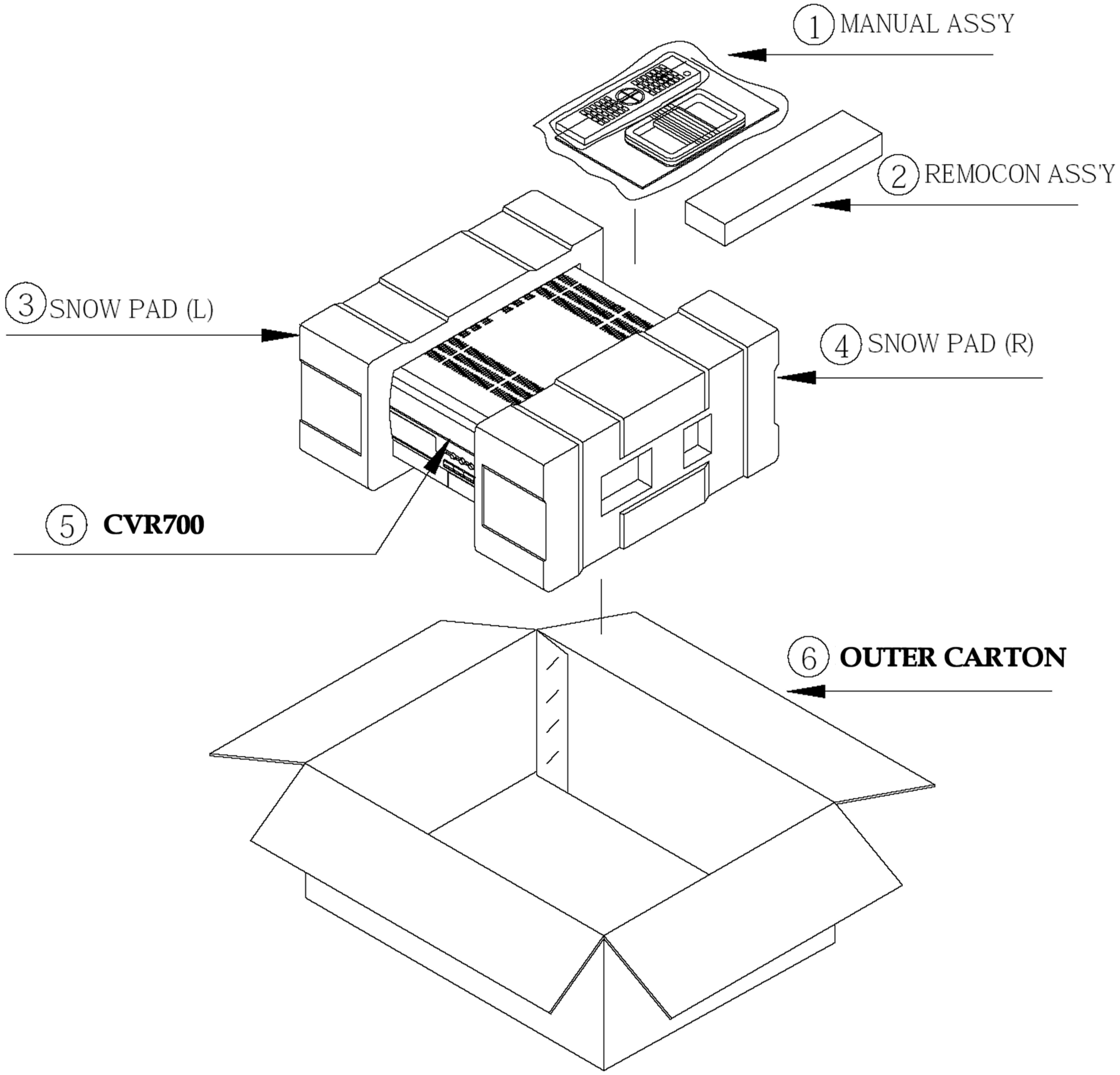

①
POLY BAG
②
OWNER'S MANUAL
③
AM LOOP ANTENNA ASS'Y
④
FM 1 POLE ANT(UL)
⑤
REMOTE CONTROL II (SIMPLIFIED)
⑥
SHEET,QUICK GUIDE
⑦
SHEET,WARRANTY
⑧
STAPLE


A
REMOTE CONTROL (MAIN)

NO	DESCRIPTION	PARTS NO.	Q,ty
1	POLY BAG		1
2	**OWNER'S MANUAL**	CQX1A914Z	1
3	AM LOOP ANTENNA ASS'Y	CSA1A026Z	1
4	FM 1 POLE ANT(UL)	CSA1A019Z	1
5	**REMOTE CONTROL II (SIMPLIFIED)**	HARTCVR700EASY	1
6	SHEET,QUICK GUIDE	CQE1A243Z	1
7	SHEET, WARRANTY	CQE1A244Z	1
8	STAPLE		3

A	**REMOTE CONTROL (MAIN)**	HARTCVR700	1

Package Drawing


① MANUAL ASS'Y
② REMOCON ASS'Y
③ SNOW PAD (L)
④ SNOW PAD (R)
⑤ CVR700
⑥ OUTER CARTON

NO	DESCRIPTION	PARTS NO.	Q,ty
1	INSTRUCTION MANUAL ASS'Y		1
2	**REMOTE CONTROL (MAIN)**	HARTCVR700	1
3	SNOW,PAD(L)	CPS1A665	1
4	SNOW,PAD(R)	CPS1A666	1
5	**CVR700**	**CVR700**	1
6	**OUTER CARTON**	CPG1A762Z	1

ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor "chip" components.

The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge build-up or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical change sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together or your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES devices.

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing.

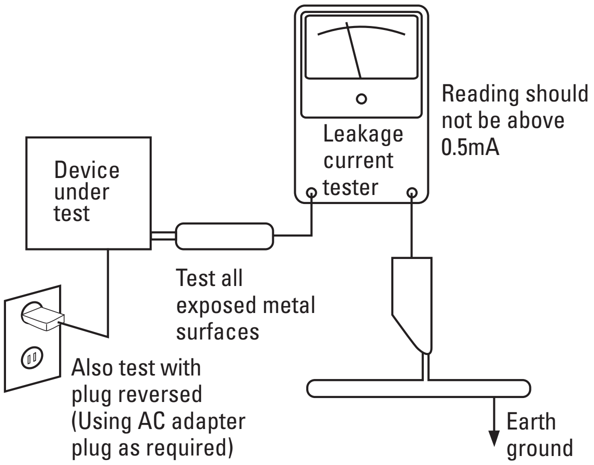
Components identified with the IEC symbol ⚠ in the parts list are special significance to safety. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings or resistance, wattage, or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed o.5mA.


Reading should not be above 0.5mA
Leakage current tester
Device under test
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

JBL CINEMA VISION TECHNICAL SPECIFICATIONS

CVPD50 Display

Size/Diagonal	50" (1270 mm); 16:9 Widescreen format
Displayable Picture Size (W x H):	43-1/2" x 24-1/2" (932mm x 532mm)
Resolution:	1366 x 768 pixels
Viewing Angle:	<160°
Contrast Ratio:	3,000:1
Brightness:	1,000 cdl/m^2
Storage Temperature:	–15°C to +60°C
Operating Temperature:	+5°C to 35°C
Maximum Usable Altitude:	6,560 ft. (2,000 meters)
Power Requirements:	120V AC, 60Hz, 450W maximum, 1W standby
Dimensions (W x H x D):	
Display Screen:	48-3/4" x 29-3/4" x 3-1/2" (4" with wall bracket) (124cm x 76cm x 9cm)
Display Screen With Credenza Stand:	48-3/4" x 37-3/8" x 10" (124cm x 95cm x 25cm)
Net Weight:	
Display Screen:	97 lb (44kg)
Display Screen With Credenza Stand:	110 lb (50kg)

CVR7007.1-Channel A/V Receiver/Optical Disc Changer/Video Processor

Optical Disc Player Section:

Applicable disc sizes:	5" (12cm) or 3" (8cm)
Applicable disc formats:	
Video:	DVD-Video, DVD-R/RW, DVD+R/RW, Video-CD (VCD)
Audio:	DVD-Audio, CD, CD-R, CD-RW, MP3, Windows Media 9, Dolby Digital and DTS Audio Discs
Still Image:	JPEG, Kodak Picture CD
Video Signal System:	NTSC
Composite (CVBS) Video Output:	1V p-p/75 ohms, sync negative polarity
S-Video (Y/C) Output:	
Y/Luminance:	1V p-p/75 ohms, sync negative polarity
C/Chrominance:	0.286V p-p
Component (Y/Pb/Pr or YUV) Video Output:	
Y:	1V p-p/75 ohms, sync negative polarity
Pb (U):	0.7V p-p/75 ohms
Pr (V):	0.7V p-p/75 ohms
Video Digital-to-Analog Converters:	27MHz/10-bit
Audio Signal-to-Noise Ratio:	105dBA
Audio Dynamic Range:	96dB (16-bit), 100dB (18-bit), 105dB (20-bit)
Audio Digital-to-Analog Converters:	192kHz/24-bit

Audio Processing Section:

Surround modes:	Dolby Digital EX, Dolby Digital, Dolby Pro Logic II, Dolby Pro Logic IIx, Dolby Pro Logic, DTS ES 6.1 Matrix and Discrete, DTS 5.1, DTS 96/24, DTS Neo:6, Logic 7 with 96kHz capability, 3 DSP Modes Bass management for DVD-Video and DVD-Audio

Inputs:

Composite (CVBS) Video:	Front Panel: 1, Rear Panel: 4
S-Video (Y/C):	Front Panel: 1, Rear Panel: 4
Component (Y/Pb/Pr or YUV):	Front Panel: 1, Rear Panel: 2
DVI (HDCP)/Analog RGB:	Rear Panel: 1
PIP Composite (CVBS):	Rear Panel: 1
Analog Audio L/R:	Front Panel: 1, Rear Panel: 5
Digital Audio Coaxial:	Front Panel: 1, Rear Panel: 4
Digital Audio Optical:	Front Panel: 1, Rear Panel: 4
IR:	Rear Panel: 1

Outputs:	
Composite (CVBS) Video:	Rear Panel: 2
S-Video (Y/C):	Rear Panel: 2
Component (Y/Pb/Pr or YUV):	Rear Panel: 1 (Monitor Out)
Analog Audio L/R:	Rear Panel: 2
Digital Audio Coaxial:	Rear Panel: 1
Digital Audio Optical:	Front Panel: 1, Rear Panel: 1
Headphone:	Front Panel: 1
LFE/Subwoofer:	Rear Panel: 1
Speaker Level Outputs:	7 pairs (Rear Panel)
IR:	Rear Panel: 1
Audio Section:	
Amplifier Type	Advanced PWM
Two Channel Stereo Mode:	100 Watts per channel continuous RMS power into CVSAT50 speakers, 90Hz to 20kHz, @<0.15%
Five and Seven Channel Cinema Modes:	100 Watts per channel continuous RMS power into CVSAT50 and CVCEN50 speakers, 90Hz to 20kHz, @<0.15%
Input Sensitivity/Impedance:	200mV/47k ohms
Signal-to-Noise Ratio:	97dBA
FM Tuner Section:	
Frequency Range:	87.5 – 108MHz
Usable Sensitivity:	IHF 1.3µV/13.2dBf
Signal-to-Noise Ratio (Mono/Stereo):	70/68dB
Distortion (Mono/Stereo):	0.2/0.3%
Stereo Separation:	40dB @ 1kHz
Selectivity:	+/–400kHz, 70dB
Image Rejection:	80dB
IF Rejection:	90dB
AM Tuner Section:	
Frequency Range:	520–1720kHz
Signal-to-Noise Ratio:	45dB
Usable Sensitivity:	Loop 500µV
Distortion:	1kHz, 50% modulation, 0.8%
Selectivity:	+/–10kHz, 30dB
Video Section:	
Television Format:	NTSC
Input Level/Impedance:	1V p-p/75 ohms
Output Level/Impedance:	1V p-p/75 ohms
Video Frequency Response:	
Composite and S-video:	10Hz – 8MHz (–3dB)
Component video:	10Hz – 100MHz (–3dB)
General:	
Power requirement:	120V AC, 60Hz
Power Consumption:	320W maximum, 78W idle, 10W standby
Dimensions (W x H x D):	17-3/8" x 6-3/5" x 17-3/4" (441mm x 168mm x 451mm)
Net Weight:	24 lb (11kg)

CVR700 Amplifier Section Specifications

1. Output Power at 6 ohms, 1kHz, 10% / 0.5% T.H.D : Stereo Mode

Front L/R	(2 Channel Driven)	100W

Output Power at 6 ohms, 1kHz, 10% / 0.5% T.H.D : Surround Mode

Front L/R	(7 Channel Driven)	90W
Center	(7 Channel Driven)	90W
Surround L/R	(7 Channel Driven)	90W
Back surround L/R	(7 Channel Driven)	90W

2. Distortion at 6 ohms, 1 kHz, 50W

Front L/R	< 0.3%
Center	< 0.3%
Surround L/R	< 0.3%
Back surround L/R	< 0.3%

3. S/N Ratio (IHF-A Weighted) : Stereo Mode

VCR (Line)	> 90dB (rated power)

S/N Ratio (IHF-A Weighted) : Surround Mode

Front L/R	> 65dB (1 watt)
Center	> 65dB (1 watt)
Surround L/R	> 65dB (1 watt)
Back surround L/R	> 65dB (1 watt)

4. Frequency Response

Front L/R	10 ~ 20kHz, -1dB/+1dB
Center (Large)	10 ~ 20kHz, -1dB/+1dB
Surround L/R	10 ~ 20kHz, -1dB/+1dB
Back surround L/R	10 ~ 20kHz, -1dB/+1dB
Subwoofer	10 ~ 200Hz, -1dB

5. Tone Control

Bass (100Hz)	+/- 10dB
Treble (10kHz)	+/- 10dB

6. Input Sensitivity

Audio-VCR (Line)	300mV (to achieve rated power) - 25Kohm
Video	1Vpp - 75 ohm

7. Record Output Level

Audio Out	270mV -1K ohm
CVBS Video Out	1Vpp - 75 ohm
Y/C Video Out	1Vpp/286mVpp - 75 ohm
Y/Pb/Pr Video Out	1Vpp/700mVpp/700mVpp - 75 ohm

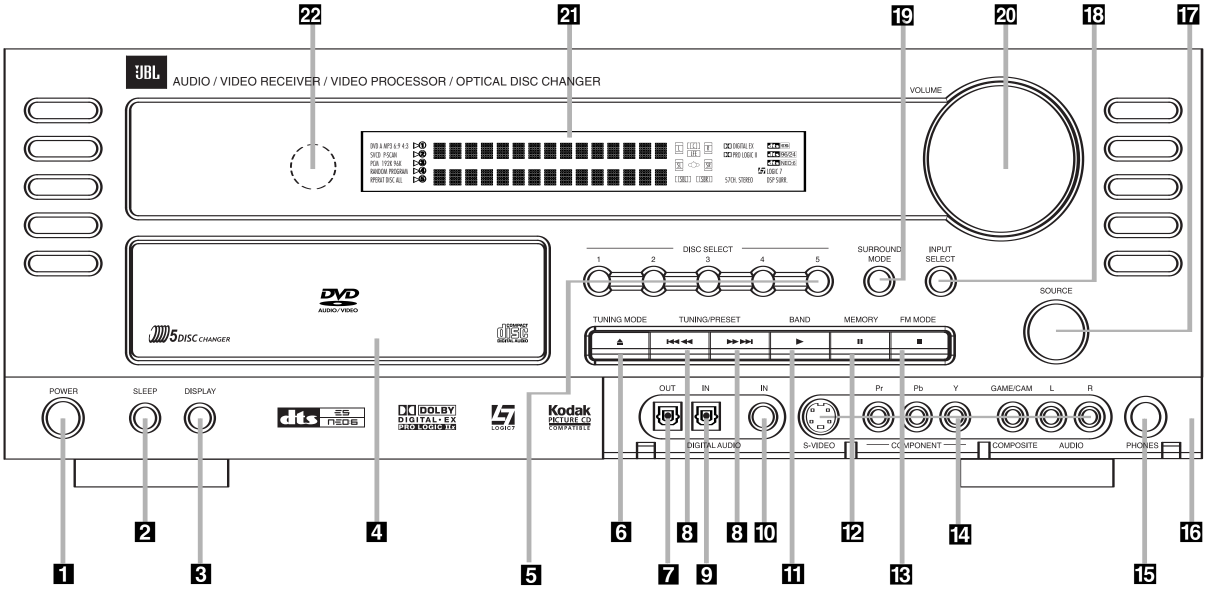
8. Cross-Talk (Separation)

Audio-VCR (Line)	> 55dB (100, 1k, 10kHz)
Dolby Digital	> 55dB (1kHz)

9. Delay Time

Dolby Pro Logic	Surround : 15 ~ 30m sec.
Dolby Digital	Surround : 0 ~ 15m sec.
	Center : 0 ~ 5m sec.

CVR700 FRONT-PANEL CONTROLS


22
21
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20
18
17
JBL
AUDIO / VIDEO RECEIVER / VIDEO PROCESSOR / OPTICAL DISC CHANGER
VOLUME
DISC SELECT
1
2
3
4
5
SURROUND MODE
INPUT SELECT
SOURCE
DVD AUDIO/VIDEO
5DISC CHANGER
TUNING MODE
TUNING/PRESET
BAND
MEMORY
FM MODE
POWER
SLEEP
DISPLAY
dts ES NEO:6
DOLBY DIGITAL • EX PRO LOGIC IIx
LOGIC 7
Kodak PICTURE CD COMPATIBLE
OUT
IN
IN
Pr
Pb
Y
GAME/CAM
L
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DIGITAL AUDIO
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13
15

1 Main Power On/Off
2 Sleep Button
3 Display Dimmer
4 Disc Drawer
5 Disc Selector
6 Tuning Mode/Eject Button
7 Front-Panel Optical Digital Audio Output
8 Tuning/Preset/Skip/Search Button
9 Front-Panel Optical Digital Audio Input
10 Front-Panel Coaxial Digital Audio Input
11 Tuner Band Selector/Play Button
12 Memory/Pause Button
13 FM Mode/Stop Button
14 Front-Panel Audio/Video Inputs
15 Headphone Jack
16 Front-Panel Door
17 Source Selector
18 Surround Mode Selector
19 Input Select Button
20 Volume Control
21 Information Display
22 Remote Sensor Window

1 Main Power On/Off: Press this button to apply power to the CVR700. The LED indicator in the center of the button will turn orange. Press it again to place the CVR700 in Standby mode, and the LED indicator will turn red.

If the CVPD50 is in use, pressing this button will also turn the CVPD50 on or off, if it is plugged into AC power and its master power switch has been turned on. If the LED on the CVPD50's front panel is flashing, then check that its master power switch is on (the "1" position).

2 Sleep Button: Press this button to place the unit in the Sleep mode. After the time shown in the display, the CVR700 will automatically go into the Standby mode. Each press of the button changes the time until turn-off in the following order:

90 min → 80 min → 70 min → 60 min → 50 min
→ 40 min → 30 min → 20 min → 10 min → OFF

When the Sleep timer is in use, the front-panel displays and other indicators will dim to half-brightness.

3 Display Dimmer: Press this button to reduce the brightness of the **Information Display 21** by 50%, or to turn the display off completely, in the following order: FULL BRIGHTNESS -> HALF BRIGHTNESS -> OFF -> FULL BRIGHTNESS.

4 Disc Drawer: This drawer is used to access the five-disc magazine changer. While a disc is playing, you may load a disc into or remove a disc from another location in the changer. If you select the current disc, it will first stop playing. Seat all discs carefully within the recess in the drawer. Do not press down on the drawer when it is open, to avoid damage to the player. It is also best to open and close the drawer by pressing the **Eject Button** 6 rather than by pushing the drawer itself.

5 Disc Selector: Press one of these buttons when prompted by a message on the **Lower Display Line** E and on the CVPD50 screen for a disc number after pressing the **Eject Button** 6. If you have selected the internal disc changer as the source device using the **Source Selector** 17 or by pressing the **DVD Input Selector** ④ ▲2 on either remote control, and then pressed the **Play Button** 11 or **Disc Direct Button** ㊲ ▲13, the CVR700 will prompt you to enter a disc number by pressing one of these buttons.

6 Tuning Mode/Eject Button: This button's function varies, depending on whether you have selected the tuner or the disc changer as the current input source. When the tuner is the source, press this button to select the function of the **Tuning/Preset Buttons** 8. Each press will alternate between the tuning function and the preset selections function, with the current choice displayed on the **Lower Display Line** E.

When the tuning function has been selected, each press of one of the **Tuning/Preset Buttons** 8 will tune the next higher or lower frequency, regardless of whether an acceptable signal is available. Press and hold the **Tuning Button** 8 to scan up or down through the frequencies until a station with acceptable signal quality is located. Tap the **Tuning Button** 8 again to end the scan.

When the preset selection function is in force, each press of one of the **Tuning/Preset Buttons** 8 will tune the next higher or lower preset station that was previously stored in the CVR700's memory.

See page 64 for information on storing preset stations.

When the disc changer is the source, press this button to open or close the **Disc Drawer 4**. The **Lower Display Line E** will prompt you to press a disc number. Press the **Disc Selector 5** corresponding to the number of the drawer you wish to access.

7 Front-Panel Optical Digital Audio Output: Connect the optical digital input of an audio or video product to this jack.

8 Tuning/Preset/Skip/Search Buttons: The function of these buttons varies depending on whether you have selected the tuner or the disc changer as the current input source, and in what context you press it.

When the tuner is the source, press the left button to tune lower-frequency stations and the right button to tune higher-frequency stations. Each tap of the buttons will increase or decrease the frequency by one increment. Press and hold the button, and the tuner will scan for a station with acceptable signal strength. When the next higher or lower frequency station with a strong-enough signal is tuned, the frequency scan will pause. Press the button again to stop scanning.

When the tuner is the source and you have pressed the **Tuning Mode Button 6** so that PRESET appears in the **Lower Display Line E**, pressing these buttons enables you to scroll through the list of stations that have been previously stored in the CVR700's memory.

See page 64 for more information on using the tuner.

When the disc changer is the source, press and release these buttons to move (skip) either backward (left button) or forward (right button) through the tracks on a DVD-Audio, CD or VCD disc or the chapters on a DVD-Video disc. Press and hold either button for at least 1 second and then release to search either backward (left button) or forward (right button) the current track or chapter at 2x speed. Press and hold again and release to increase the scan speed to 4x. Repeat this procedure while in scan mode to cycle through these scan speeds: 2x, 4x, 16x, 100x, 2x and so forth. Press and release the button while scanning to skip tracks or chapters. To stop searching, you must press the **Play Button 11**, the **Pause Button 12**, the **Stop Button 13** or the other **Search Button 8**.

9 Front-Panel Optical Digital Audio Input: Connect the optical digital output of an audio or video product to this jack.

10 Front-Panel Coaxial Digital Audio Input: Connect the coaxial digital output of an audio or video product to this jack.

11 Tuner Band Selector/Play Button: The function of this button varies depending on whether you have selected the tuner or the disc changer as the source.

When the tuner is the source, pressing this button will switch between the AM and FM frequency bands. (See page 64 for more information on the tuner.)

When the disc changer is the source, pressing this button will prompt you to enter the number of the disc you wish to play (corresponding to the drawer in which the disc is loaded). You may select a disc either by pressing one of the **Disc Selectors 5** numbered 1 through 5, or by pressing the **Numeric Keys ㊽** ▲14 numbered 1 through 5 on either remote control. If you don't select a disc number within 5 seconds, the CVR700 will play the last disc that was selected. If the disc is an MP3 or WMA disc, each press of this button will expand the current folder until a file is located, and the final press will begin play of that file. If no disc is found, the STOP MODE, DISC 1 message will appear and you will need to open the drawer to insert a disc.

12 Memory/Pause Button: The function of this button varies depending on whether you have selected the tuner or the disc changer as the input source.

When the tuner is the source, press this button to store the currently tuned station as a preset. Two flashing underlines will appear in the **Upper Display Line H**. Press the **Tuning Mode Button 6** until PRESET appears in the **Lower Display Line E** to indicate the function of the **Tuning/Preset Buttons 8**, then press either of the **Preset Buttons 8** until the desired preset location appears in place of the flashing underlines. Press the **Memory Button 12** again to store the station in the preset location displayed.

When the disc changer is the source, pressing this button during playback freezes a picture (for DVD and VCD discs) and pauses the playback signal. Pressing the **Pause Button 12** twice places the DVD changer in the Step Forward mode, in which each subsequent press of the **Pause Button 12** advances the picture one step or frame. Press the **Play** or **Stop Button 11 13** to exit the Step Forward mode.

13 FM Mode/Stop Button: The function of this button varies depending on whether you have selected the tuner or the disc changer as the input source.

When the tuner is the source, press this button to switch between Stereo and Mono modes for FM radio reception. When weak reception is encountered, select the Mono tuning mode. Press again to switch back to Stereo mode. See page 64 for more information.

When the disc changer is the source, press this button once to stop playback of the current disc and enter Resume mode. In Resume mode, the CVR700 will "remember" the point on the disc where play was stopped, and the next time the disc is played, it will commence playback from this point, unless the unit was turned off, another disc was selected or another source was selected. To fully stop the disc, press this button twice. There may be a 1- or 2-second delay before Stop mode takes effect. Resume mode is not available for CDs, VCDs, MP3 discs or WMA discs. If one of those disc types is playing, a single press of this button will place the disc in Stop mode, as indicated by the solid square and the word STOP appearing in the **Upper Display Line H**.

14 Front-Panel Audio/Video Inputs: The front-panel inputs give you the flexibility to temporarily connect a device to the CVR700. This capability is useful for such applications as viewing home movies directly from the camcorder, or playing a video game. For video devices, connect one of the composite video, S-video or component video outputs of the device to the corresponding front-panel input, and connect the left and right audio outputs to the analog audio inputs. Do not make more than one type of video connection. In addition to the analog audio connection, you may also connect an optical or coaxial digital audio output from the device to the CVR700. You will then need to press the **Input Select Button 19** to select the desired audio input (analog, optical or coaxial), and specify the correct video input using the audio on-screen menu system. Press the **System Selector ❻**, and then the **OSD Button ⓮** to enter the menu system. Select the SOURCES submenu, and make sure the GAME/CAMERA source is selected (or select the

SOURCE line to adjust it). Scroll down to the VIDEO INPUT line and select it to configure the CVR700 to use the video input you connected your device to.

15 **Headphones Jack:** This jack may be used to listen to the CVR700's output through a pair of headphones. Be certain that the headphones have a standard 1/4" stereo phone plug, or that you use an adapter, as needed, to convert the plug on your headphones to the 1/4" jack used on the CVR700. When the headphone jack is in use, the main room speakers will automatically be turned off and the unit will output a standard stereo signal. For more information on headphone listening, see page 60.

16 **Front-Panel Door:** The door may be closed to hide the front-panel jacks when they are not in use for a smoother appearance. To open the door, gently push on the bottom of the door in the center to swing it down towards you, or gently pull on the upper right corner. Push upward on it to close.

17 **Source Selector:** Rotate this knob to scroll through the available input sources. Turn the knob slowly and gently, and you will feel a soft click as each source is engaged. You may also hear a click as the CVR700’s electrical circuits engage the source. This is normal, and assures you that you have correctly selected the source. The name of the source will be displayed in the **Upper Display Line H**, and in a Status Banner on screen, together with the source’s audio input (for external sources) and video format.

18 **Surround Mode Selector:** Press this button repeatedly to scroll through the available surround modes. The modes available will depend on the number of speakers in the system and whether the input is analog or digital. See page 60 for more information on surround modes.

NOTE: 6.1 and 7.1 digital modes are available only when the appropriate digital bitstream is present.

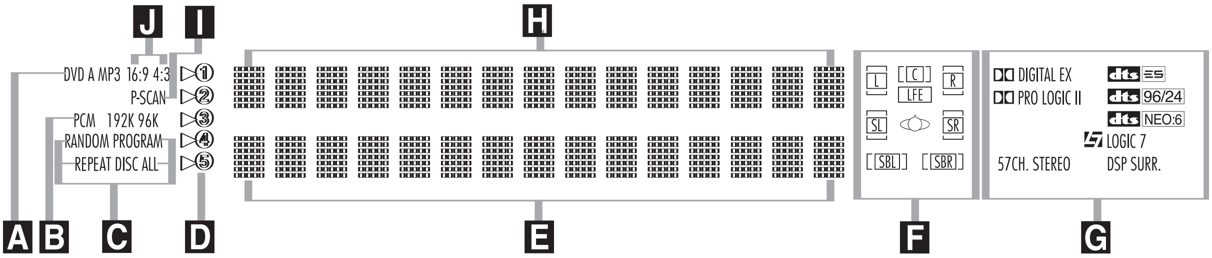
19 **Input Select Button:** After you have selected the desired input source, press this button repeatedly to scroll through the analog, optical digital and coaxial digital audio inputs available for that source.

20 **Volume Control:** Turn this knob clockwise to increase the volume, counterclockwise to decrease the volume. If the CVR700 is muted, adjusting the volume control will automatically release the unit from the silenced condition.

21 **Information Display:** This display delivers messages and status information to help you operate the CVR700. See page 19 for a complete explanation of the display.

22 **Remote Sensor Window:** The sensor behind this window receives infrared signals from the remote control that are intended to control the non-video functions of the CVR700 only. Aim the remote at this area and do not block or cover it unless an external remote sensor is installed. Note that unless the CVR700 is not being used with the CVPD50, it is best to aim the remote at the LED light on the front of the CVPD50 plasma display, as the IR receiver located there can accept remote control signals intended for both the plasma display and the CVR700.

CVR700 FRONT-PANEL INFORMATION DISPLAY



A Disc-Type Indicators
B PCM Bitstream Indicators
C Programmed Play Indicators
D Disc Indicators
E Lower Display Line
F Speaker/Channel Input Indicators
G Surround Mode Indicators
H Upper Display Line
I Progressive Scan Indicator
J Aspect Ratio Indicator

A Disc-Type Indicators: The **DVD**, **DVD-Audio**, **CD**, **VCD** or **MP3** indicator will light to show the type of disc currently being played. WMA and JPEG discs will be identified in the **Upper** and **Lower Display Lines EH**.

B PCM Bitstream Indicators: The PCM indicator will light when a PCM (pulse code modulation) bitstream is detected. PCM bitstreams are used on audio CDs, and may also be found on other disc types either as the main audio format or as the format used on certain portions of the disc, such as a "making of" featurettes on a DVD. The 96K or 192K indicators will light when a high-resolution audio signal is detected. This type of audio track may be found on some DVD-Audio discs.

C Programmed Play Indicators: The CVR700 is capable of playing discs in a programmed order other than the order in which the tracks are found on the disc. Tracks may be played in random order, or you may program some or all of the tracks on a CD to play in a playlist order. In addition, you may program the CVR700 to repeat play of some of the tracks on a disc, an entire disc, all discs, or a programmed playlist. Some of the programmed modes may not be available for certain disc formats. See page 75 for more information.

D Disc Indicators: The circled numbers will light to indicate the positions of loaded discs, and the indicator for the current disc will flash.

E Lower Display Line: Depending on the unit's status, a variety of messages will appear here. In normal operation, the current surround mode will appear on this line.

F Speaker/Channel Input Indicators: These indicators are multipurpose, indicating both the speaker type selected for each channel and the incoming data signal configuration. The left, center, right, right surround and left surround speaker indicators are composed of two boxes, while the subwoofer is a single box. The inner box lights when a "small" speaker is selected, and the outer boxes light when "large" speakers are selected. When none of the boxes are lit for the center, surround or subwoofer channels, no speaker has been assigned that position. (See page 48 for more information on configuring speakers.) The letters inside each box display the active input channels. For standard analog inputs, only the L and R will light, indicating a stereo input. For a digital source, the indicators will light to display the channels being received at the digital input. When the letters flash, the digital input has been interrupted. When a 6.1-channel bitstream is detected, a horizontal line will appear between the icons for the surround back left and right channels to indicate that these two channels are in mono mode. (See page 61 for more information on the Channel Indicators.)

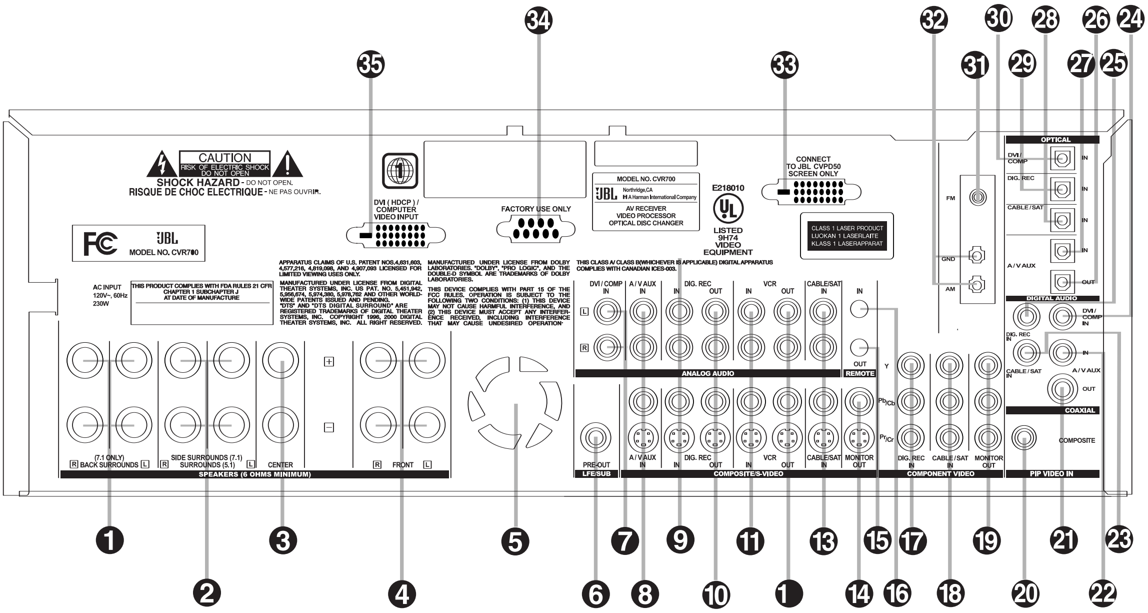
G Surround Mode Indicators: One of these indicators will light to show the surround mode in use. Depending on the specific combination of input sources and surround mode selected, more than one indicator may light. (See page 61 for more information.)

H Upper Display Line: Depending on the unit's status, a variety of messages will appear here. In normal operation, this line will show the current input source and identify whether an analog or digital input is in use. When the tuner is selected as the input, this line will identify the station as AM or FM and show the frequency and preset number, if any.

I Progressive Scan Indicator: This indicator lights when the CVR700's progressive scan component video output is activated.

J Aspect Ratio Indicators: The aspect ratio of the incoming video signal will light. These indicators are informational only and reflect the aspect ratio information provided by the DVD disc itself. You may need or wish to make manual adjustments to display the images so that they fill the screen, or if you prefer to avoid any scaling or cropping of the images, you may wish to letterbox the image. See pages 13 and 27 for more information on adjusting the CVPD50 display to compensate for various aspect ratio issues.

CVR700 REAR-PANEL CONNECTIONS



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CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN
SHOCK HAZARD - DO NOT OPEN.
RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR.
MODEL NO. CVR700
DVI (HDCP) / COMPUTER VIDEO INPUT
FACTORY USE ONLY
CONNECT TO JBL CVPD50 SCREEN ONLY
LISTED 9H74 VIDEO EQUIPMENT
AC INPUT 120V~, 60Hz 230W
OPTICAL
DIGITAL AUDIO
COAXIAL
FM
GND
AM
ANALOG AUDIO
REMOTE
COMPOSITE/S-VIDEO
COMPONENT VIDEO
PIP VIDEO IN
LFE/SUB
SPEAKERS (6 OHMS MINIMUM)
(7.1 ONLY) BACK SURROUNDS
SIDE SURROUNDS (7.1) SURROUNDS (5.1)
CENTER
FRONT
❶
❸
❺
❼
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NOTE: To make it easier to follow the instructions that refer to this illustration, a larger copy may be downloaded from the Product Support section for this product at www.jbl.com.

❶ Back Surround Speaker Outputs (7.1-channel only)
❷ Side Surround (7.1-channel) or Surround (5.1-channel) Speaker Outputs
❸ Center Speaker Outputs
❹ Front Speaker Outputs
❺ Fan Slots
❻ Subwoofer Output
❼ DVI/Computer Analog Audio Inputs
❽ Auxiliary Analog Audio/Video Inputs
❾ Digital Recorder Analog Audio/Video Inputs
❿ Digital Recorder Analog Audio/Video Outputs
⓫ VCR Analog Audio/Video Inputs
⓬ VCR Analog Audio/Video Outputs
⓭ Cable/Satellite Analog Audio/Video Inputs
⓮ Composite and S-Video Monitor Outputs
⓯ Remote IR Output
⓰ Remote IR Input
⓱ Digital Recorder Component Video Inputs
⓲ Cable/Satellite Component Video Inputs
⓳ Component Video Monitor Outputs
⓴ Picture-in-Picture (PIP) Composite Video Input
㉑ Coaxial Digital Audio Output
㉒ Auxiliary Coaxial Digital Audio Input
㉓ Cable/Satellite Coaxial Digital Audio Input
㉔ DVI/Computer Coaxial Digital Audio Input
㉕ Digital Recorder Coaxial Digital Audio Input
㉖ Optical Digital Audio Output
㉗ Auxiliary Optical Digital Audio Input
㉘ Cable/Satellite Optical Digital Audio Input
㉙ Digital Recorder Optical Digital Audio Input
㉚ DVI/Computer Optical Digital Audio Input
㉛ FM Antenna Jack
㉜ AM Antenna Terminals
㉝ Output to JBL Cinema Vision CVPD50 Screen
㉞ Port for Factory Use Only
㉟ DVI (HDCP)/Computer Video Input

NOTE: To assist in making the correct connections for multichannel input, output and speaker connections, all connection jacks and terminals are color-coded in conformance with the CEA standards as follows:

Front Left:	White	Subwoofer:	Purple
Front Right:	Red	Digital Audio:	Orange
Center:	Green	Composite Video:	Yellow
Side Surround/Surround Left:	Blue	Component Video “Y”:	Green
Side Surround/Surround Right:	Gray	Component Video “Pr”:	Red
Back Surround Left:	Brown	Component Video “Pb”:	Blue
Back Surround Right:	Tan		

❶ Back Surround Speaker Outputs: These speaker terminals are normally used to power the back surround left/back surround right speakers in a 7.1-channel system. In conformance with the CEA color-code specification, the brown terminal is the positive (+) terminal that should be connected to the red (+) terminal on the Back Surround Left speaker with older color-coding, while the tan terminal should be connected to the red (+) terminal on the Back Surround Right speaker with the older color-coding. Connect the black (–) terminal on the CVR700 to the matching black negative (–) terminals for each back surround speaker. (See page 42 for more information on speaker polarity.)

❷ Side Surround Speaker Outputs: Connect these outputs to the matching + and – terminals on your side surround (7.1-channel system) or Surround (5.1-channel system) speakers. Conforming to CEA color-code specifications, the blue terminal is the positive (+) terminal that should be connected to the (+) terminal on the Side Surround/Surround Left speaker with older color-coding; the gray terminal should be connected to the red (+) terminal on the Side Surround/Surround Right speaker with the older color-coding. Connect the black (–) terminals on the CVR700 to the matching black negative (–) terminals for each side surround speaker. (See page 42 for more information on speaker polarity.)

❸ **Center Speaker Outputs:** Connect these outputs to the matching + and – terminals on your center channel speaker. In conformance with the CEA color-code specification, the green terminal is the positive (+) terminal that should be connected to the red (+) terminal on speakers with the older color-coding. Connect the black (–) terminal on the CVR700 to the black negative (–) terminal on the speaker. (See page 42 for more information.)

❹ **Front Speaker Outputs:** Connect these outputs to the matching + or – terminals on your left and right speakers. When making speaker connections always make certain to maintain correct polarity by connecting the color-coding (white for front left and red for front right) (+) terminals on the CVR700 to the red (+) terminals on the speakers and black (–) terminals on the CVR700 to the black terminals on the speakers (see page 42 for more information).

❺ **Fan Slots:** These ventilation holes are the output of the CVR700's airflow system. To ensure proper operation of the unit and to avoid possible damage to delicate surfaces, make certain that these holes are not blocked and that there is at least three inches of open space between the vent holes and any wooden or fabric surface. It is equally important to make sure that the holes in the top and bottom covers of the unit are not blocked, either. It is normal for the fan to remain on at all times at one of three speeds, depending on the selection you make in the ADVANCED SETTINGS submenu. By selecting the default MINIMUM NOISE setting, the fan will run at its slowest speed at volumes below –20dB, and at its slightly faster medium speed at higher volumes. This setting should only be selected when the CVR700 is placed on a shelf and not within an enclosed space. When the CVR700 is placed inside a cabinet or other enclosed space, select the MAXIMUM COOLING setting, in which the fan will always be on at its highest setting.

❻ **Subwoofer Output:** Connect this jack to the line-level input of a powered subwoofer. If an external subwoofer amplifier is used, connect this jack to the subwoofer amplifier input. Use a Y-adaptor when connecting two subwoofers.

❼ **DVI/Computer Analog Audio Inputs:** Connect the left/right analog audio outputs of a computer or other device with a DVI output to these jacks to benefit from the CVR700's surround processor for added realism and excitement when playing computer games, or giving multimedia presentations, or for other uses. When you have also connected the computer's DVI video output to the **DVI/Computer Video Input** ㉟, you may also benefit from the superior visual presentation of the JBL Cinema Vision CVPD50 screen.

You may connect any device with left and right analog audio outputs to these jacks.

❽ **Auxilliary Analog Audio/Video Inputs:** Connect the left/right analog audio and composite or S-video jacks of a video device to these jacks. You may connect any video source such as a VCR, HDTV receiver, or other device to these inputs. Note that if the source device offers digital audio capability, that connection must be made separately, and the CVR700 configured accordingly. Note that the Auxiliary Source Input does not have component video inputs assigned to it and thus may only be used with composite or S-video. Therefore, if possible, it is recommended that an HDTV receiver be used with the Cable/Sat or even the Digital Recorder source, so that a component video connection may be made. (See page 46 for more information on configuring an input for various source options.)

❾ **Digital Recorder Analog Audio/Video Inputs:** Connect the left/right analog audio and composite or S-video PLAY/OUT jacks of a video recording device such as a VCR, DVD-Recorder or personal video recorder to these jacks. The CVR700's remote control has a variety of digital recorders available as the default devices for this input, but you may connect any video source such as a VCR, HDTV or cable set-top box, personal video recorder, or other device to these inputs. Note that if the source device offers either digital audio or component video capability, those connections must be made separately, and the CVR700 configured accordingly. (See page 46 for more information on configuring an input for various source options.)

❿ **Digital Recorder Analog Audio/Video Outputs:** Connect the left/right analog audio and composite or S-video RECORD/IN jacks of a video recording device such as a DVD-Recorder, personal video recorder or VCR to these jacks.

⓫ **VCR Analog Audio/Video Inputs:** Connect the left/right analog audio and composite or S-video PLAY/OUT jacks of a video recording device such as a VCR, DVD-Recorder or personal video recorder to these jacks.

❶ **VCR Analog Audio/Video Outputs:** Connect the left/right analog audio and composite or S-video RECORD/IN jacks of a video recording device such as a VCR, DVD-Recorder or personal video recorder to these jacks.

The CVR700's remote control has a VCR as the default device for this input, but you may connect any video source such as an HDTV or cable set-top box, personal video recorder, or other device to these inputs. Note, however, that the VCR source is not associated with any digital audio inputs or component video inputs, and should therefore only be used as a last resort for devices that have those capabilities. The preferred system configuration is to connect an HDTV tuner or digital cable or satellite receiver to the Cable/Sat source, and to connect a personal video recorder, such as a TiVo,® to the Digital Recorder source.

⓭ **Cable/Satellite Analog Audio/Video Inputs:** Connect the left/right analog audio and composite or S-video jacks of a video device to these jacks. The CVR700's remote control has a cable, satellite or HDTV set-top as the default devices available for this input, but you may connect any video source such as a VCR, HDTV or satellite receiver, personal video recorder, or other device to these inputs. Note that if the source device offers either digital audio or component video capability, those connections must be made separately, and the CVR700 configured accordingly.

⑭ **Composite and S-Video Monitor Outputs:** If you are not using the CVPD50, or if you desire a secondary display, connect thse jacks to the composite or S-video input of a TV monitor or video projector to view the output of any standard video source selected by the receiver's video switcher. If both standard composite and S-video sources are used, you must make connections from both Video Monitor Output jacks to your display. Also, if component video sources are used, you must also connect the **Component Video Monitor Output ⑲** to the display.

NOTE: The CVR700 is optimized to be used with the CVPD50 High-Definition Plasma Display. Composite, S-video and component video monitor outputs on the CVR700 are provided as a means of connecting an auxiliary display only. On-screen status messages, and all digital video post-processing – including scaling, de-interlacing, and upconversion features of the CVR700 – are only available when used with CVPD50.

⑮ **Remote IR Output:** This connection permits the IR sensor in the receiver to serve other remote controlled devices. Connect this jack to the "IR IN" jack on JBL (or other compatible) equipment.

⑯ **Remote IR Input:** If the CVR700's front-panel IR sensor is blocked due to cabinet doors or other obstructions, an external IR sensor may be used. Connect the output of the sensor to this jack.

NOTE: The remote IR input and output on the CVR700 are only used for non-video functions, and will have no effect on the CVPD50 plasma display. JBL recommends that you point the remote control at the LED light on the front of the CVPD50 display for all functions, as the CVPD50 will pass any non-video command codes to the CVR700.

⑰ **Component Video Digital Recorder Inputs:** These inputs may be used with any video source device equipped with analog Y/Pr/Pb component video outputs. These jacks are permanently linked to the Digital Recorder Source input.

⑱ **Component Video Cable/Satellite Inputs:** These inputs may be used with any video source device equipped with analog Y/Pr/Pb component video outputs. These jacks are permanently linked to the Cable/Satellite source input.

⑲ **Component Video Monitor Outputs:** If you are not using the CVPD50, or if you desire a secondary video display, connect these outputs to the component video inputs of a video projector or monitor. When a source connected to one of the **Component Video Inputs ⑰⑱** is selected, the signal will be sent to these jacks.

NOTE: The CVR700 is optimized to be used with the CVPD50 High-Definition Plasma Display. Composite, S-video and component video monitor outputs on the CVR700 are provided as a means of connecting an auxiliary display only. On-screen status messages, and all digital video post-processing – including scaling, de-interlacing, and upconversion features of the CVR700 – are only available when used with CVPD50.

⑳ **Picture-in-Picture (PIP) Composite Video Input:** Connect the composite video output of a video device that you would like to have available for picture-in-picture (PIP) viewing using the JBL Cinema Vision CVPD50 screen. When the PIP function is activated, the signal fed to this jack will appear within a small field over the main program visible on the plasma screen. Except for the DVI/Computer source, the PIP view may also be available as a split screen. Use the Screen menu system to configure the PIP view. When the main source is HD component video (480p or better), the PIP function is not available.

The PIP source must be able to output composite video simultaneously with its main method of connection to the CVR700. If the PIP device is connected via its composite video output to a source input on the CVR700, a Y-Cable will be required to connect to both the main source input jack and the PIP input.

㉑ **Coaxial Digital Audio Output:** Connect this jack to the coaxial digital input of a DVD+R/RW, DVD-R/RW, CD-R/RW, MiniDisc or other compatible digital recorder.

㉒ **Auxiliary Coaxial Digital Audio Input:** Connect the coax digital output from a DVD player, HDTV receiver, the S/P-DIF output of a compatible computer sound card playing audio files or streams, LD player or CD player to this jack. The signal may be a Dolby Digital signal, DTS signal or a standard PCM digital source. Do not connect the RF digital output of an LD player to this jack. This input is permanently assigned to the Auxiliary source input.

㉓ **Cable/Satellite Coaxial Digital Audio Input:** Connect the coaxial digital audio output from a DVD player, HDTV receiver, the S/P-DIF output of a compatible computer sound card playing audio files or streams, LD player or CD player to this jack. The signal may be a Dolby Digital signal, DTS signal or a standard PCM digital source. Do not connect the RF digital output of an LD player to this jack. This input is permanently assigned to the Cable/Satellite source input.

㉔ **DVI/Computer Coaxial Digital Audio Input:** Connect the coaxial digital audio output from a DVD player, HDTV receiver, the S/P-DIF output of a compatible computer sound card playing audio files or streams, LD player or CD player to this jack. The signal may be a Dolby Digital signal, DTS signal or a standard PCM digital source. Do not connect the RF digital output of an LD player to this jack. This input is permanently assigned to the DVI/Computer source input.

㉕ **Digital Recorder Coaxial Digital Audio Input:** Connect the coaxial digital audio output from a DVD player, HDTV receiver, the S/P-DIF output of a compatible computer sound card playing audio files or streams, LD player or CD player to this jack. The signal may be a Dolby Digital signal, DTS signal or a standard PCM digital source. Do not connect the RF digital output of an LD player to this jack. This input is permanently assigned to the Digital Recorder source input.

㉖ **Optical Digital Audio Output:** Connect this jack to the optical digital input connector on a DVD+R/RW, DVD-R/RW, CD-R/RW, MiniDisc or other compatible digital recorder.

㉗ **Auxiliary Optical Digital Audio Inputs:** Connect the optical digital output from a DVD player, HDTV receiver, the S/P-DIF output of a compatible computer sound card playing audio files or streams, LD player or CD player to these jacks. The signal may be a Dolby Digital signal, a DTS signal or standard PCM digital source. This input is permanently assigned to the Auxiliary source input.

㉘ **Cable/Satellite Optical Digital Audio Input:** Connect the optical digital audio output from a DVD player, HDTV receiver, the S/P-DIF output of a compatible computer sound card playing audio files or streams, LD player or CD player to this jack. The signal may be a Dolby Digital signal, DTS signal or a standard PCM digital source. Do not connect the RF digital output of an LD player to this jack. This input is permanently assigned to the Cable/Satellite source input.

㉙ **Digital Recorder Optical Digital Audio Input:** Connect the optical digital audio output from a DVD player, HDTV receiver, the S/P-DIF output of a compatible computer sound card playing audio files or streams, LD player or CD player to this jack. The signal may be a Dolby Digital signal, DTS signal or a standard PCM digital source. Do not connect the RF digital output of an LD player to this jack. This input is permanently assigned to the Digital Recorder source input.

㉚ **DVI/Computer Optical Digital Audio Input:** Connect the optical digital audio output from a DVD player, HDTV receiver, the S/P-DIF output of a compatible computer sound card playing audio files or streams, LD player or CD player to this jack. The signal may be a Dolby Digital signal, DTS signal or a standard PCM digital source. Do not connect the RF digital output of an LD player to this jack. This input is permanently assigned to the DVI/Computer source input.

㉛ **FM Antenna:** Connect the supplied indoor or an optional external FM antenna to this terminal

㉜ **AM Antenna Terminal:** Connect the AM loop antenna supplied with the receiver to these terminals. If an external AM antenna is used, make connections to the AM and GND terminals in accordance with the instructions supplied with the antenna.

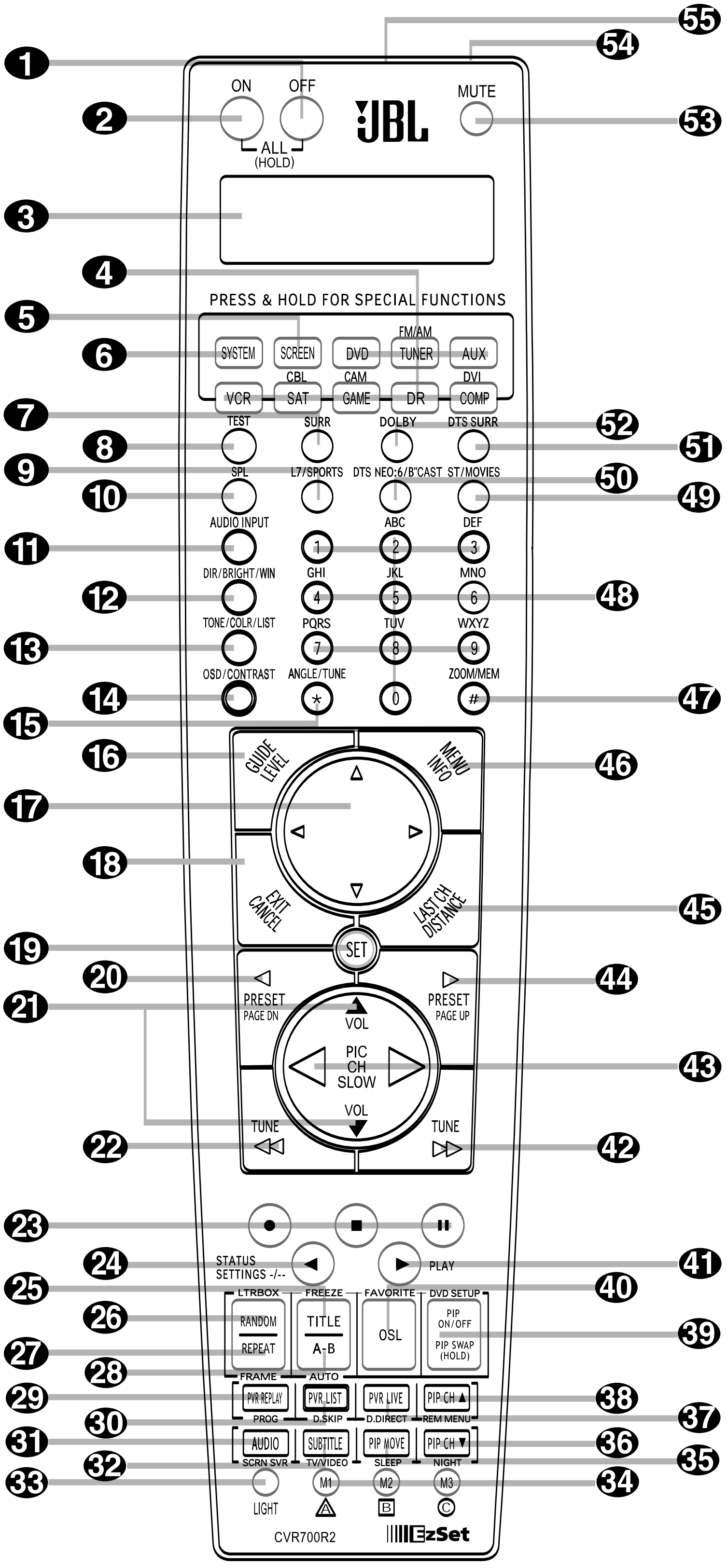
NOTE: If using indoor antennas, please mount them as far away from CVR700 and CVPD50 as possible, and empirically position them for the least amount of possible interference from the many digital processors inside the CVR700 and CVPD50.

㉝ **Output to JBL Cinema Vision CVPD50 Screen:** Connect this output to the JBL Cinema Vision CVPD50 screen using the cable supplied with the screen. When the CVR700 is used with the JBL Cinema Vision CVPD50 screen, no other video monitor connections need to be made. Do not connect this output to any other device. Doing so may cause serious damage to the device or to the CVR700, which would not be covered under the warranty.

㉞ **Port for Factory Use Only:** This connector is used only by factory-authorized service personnel. Do not connect any control devices to this port, or attempt to connect it to any other device. Doing so may cause serious damage to the device or to the CVR700, which would not be covered under warranty.

㉟ **DVI (HDCP)/Computer Video Input:** Connect the compatible DVI video output of a computer, HDTV tuner or DVD player to this input. This input can also be connected to the VGA output of a conventional PC (cable for connection to a VGA output PC is included with the CVPD50). Be sure to select the appropriate device from the SCREEN MENU. You must select the DVI input first by pressing the **DVI Input Selector** ❹ ▲10 on the remote control or the **Source Selector** 17 on the CVR700 front panel before you can configure your DVI input via the SCREEN MENU. Please note that due to newness of HDCP technology, all HDCP-encoded DVI outputs may not be compatible with the CVR700. We recommend that you test the compatibility of an HDCP DVI source with your CVR700 before purchasing that source unit. In certain problematic connections, switching to a top-quality DVI cable that is as short as possible will help improve connection consistency. This input is assigned to the DVI/Computer source input.

CVR700R2 REMOTE CONTROL FUNCTIONS


ON
OFF
ALL
(HOLD)
MUTE
JBL
PRESS & HOLD FOR SPECIAL FUNCTIONS
SYSTEM
SCREEN
DVD
FM/AM
TUNER
AUX
CBL
CAM
DVI
VCR
SAT
GAME
DR
COMP
TEST
SURR
DOLBY
DTS SURR
SPL
L7/SPORTS
DTS NEO:6/B'CAST
ST/MOVIES
AUDIO INPUT
ABC
DEF
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3
DIR/BRIGHT/WIN
GHI
JKL
MNO
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TONE/COLR/LIST
PQRS
TUV
WXYZ
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OSD/CONTRAST
ANGLE/TUNE
ZOOM/MEM
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GUIDE LEVEL
MENU INFO
EXIT CANCEL
LAST CH DISTANCE
SET
PRESET PAGE DN
PRESET PAGE UP
VOL
PIC CH SLOW
VOL
TUNE
TUNE
STATUS SETTINGS -/--
PLAY
LTRBOX
FREEZE
FAVORITE
DVD SETUP
RANDOM
REPEAT
TITLE
A-B
OSL
PIP ON/OFF
PIP SWAP (HOLD)
FRAME
AUTO
PVR REPLAY
PVR LIST
PVR LIVE
PIP CH ▲
PROG
D.SKIP
D.DIRECT
REM MENU
AUDIO
SUBTITLE
PIP MOVE
PIP CH ▼
SCRN SVR
TV/VIDEO
SLEEP
NIGHT
M1
M2
M3
LIGHT
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B
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CVR700R2
EzSet
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① Power Off (All)
② Power On (All)
③ LCD Information Display
④ Input Selectors
⑤ Screen Selector
⑥ System Selector
⑦ Surround Mode Selector
⑧ Test Tone Button
⑨ Logic 7 Mode/Sports Preset Button
⑩ SPL Select Button
⑪ Audio Input Selector
⑫ Direct/Brightness/Window Button
⑬ Tone Mode/Color/List Button
⑭ OSD/Contrast Button
⑮ Angle/Tuning Mode Button
⑯ Level/Guide Button
⑰ ▲/▼/◀/▶ Navigation Disc
⑱ Exit/Cancel Button
⑲ Set Button
⑳ Preset/Page Down/Reverse Skip Button
㉑ Volume Up/Down Control
㉒ Tuning Down/Reverse Search Button
㉓ Record/Stop/Pause Transport Controls
㉔ Status/Settings/Button
㉕ Title/Freeze Button
㉖ Random/Letterbox Button
㉗ Repeat/Frame Button
㉘ A-B/Auto Button
㉙ Program/PVR Replay Button
㉚ Disc Skip/PVR List Button
㉛ Audio/Screen Saver Button
㉜ Subtitle/TV/Video Button
㉝ Light Button
㉞ Macro/A/B/C Buttons
㉟ Sleep/PIP Move Button
㊱ Night Mode/PIP Channel Down Button
㊲ Disc Direct/PVR Live Button
㊳ Remote Menu/PIP Channel Up Button
㊴ DVD Setup/PIP On-Off/PIP Swap Button
㊵ JBL On Screen Library™/Favorite Button
㊶ Play Transport Control Button
㊷ Tuning Up/Forward Search Button
㊸ Channel/Slow Play Up/Down Control
㊹ Preset/Page Up/Forward Skip Button
㊺ Last Channel/Distance Button
㊻ Screen Setup/Disc Menu/Info Button
㊼ Zoom/Memory Button
㊽ Alphanumeric Keys
㊾ Stereo Mode/Movies Preset Button
㊿ DTS Neo:6 Mode/Broadcast Preset Button
(51) DTS Digital Surround Mode Button
(52) Dolby Surround Mode Button
(53) Mute Button
(54) EzSet Microphone Sensor
(55) IR Transmitter/Receiver

CVR700R2 REMOTE CONTROL FUNCTIONS

IMPORTANT NOTE: The JBL Cinema Vision remotes are powerful devices capable of controlling virtually your entire home cinema system. In comparison to a traditional system of the same capabilities, these remotes can replace up to 10 separate remote controls and therefore end the confusion and clutter associated with having a different remote for each of your system components. In order to achieve this goal, the JBL Cinema Vision remotes are designed to assume the duties of controlling different devices within your system by first pressing one of the 10 **Selector Buttons** ❹❻❼ ▲2 ▲10 ▲33 ▲34 . Pressing one of these buttons places your remote control in a different “page”, where the remote buttons are assigned control functions available for that specific purpose. For example, all internal DVD changer functions are accessed by pressing the **DVD Button** ❹ ▲2 first, and all CVPD50 Plasma Display functions are accessed by pressing the **Screen Button** ❺▲34 first, and all overall audio and system commands for the CVR700 are accessed by first pressing the **System Button** ❻ ▲33 . Throughout this manual, you will see references to the system being active in DVD, SYSTEM, SCREEN, CABLE/SAT, or other modes. This means that one of these 10 keys is to be pressed first to place your remote in the prescribed mode before accessing any specific controls. It is important to always remember to press the appropriate page selection button before trying to access any specific functions for a system or source. This may take a little bit of discipline and practice at first, but it should become second nature in a very short time.

NOTES:

- The function names shown here are each button’s function when used with the CVR700 (System), its internal DVD changer (DVD/Main) and the CVPD50 (Screen). Most buttons have additional functions when used with other devices, and some of these functions may be assigned to different buttons, depending on which device was selected. The device name will appear in the upper line of the **LCD Information Display** ❸ and the function assigned to that device will appear in the lower line when the button is pressed. See pages 89 through 91 for a list of the functions assigned to each button for each device type.
- Some buttons have special functions when they are pressed and held for 3 seconds.
- The jack on the upper right side of the remote is reserved for future use. Do not remove the plug provided or connect any device to the jack.
- To make it easier to follow the instructions that refer to this illustration, a larger copy may be downloaded from the Product Support section for this product at www.jbl.com.
- The JBL Cinema Vision main remote control may be programmed to control up to eight devices, including the CVR700 receiver with disc changer and the CVPD50 screen. Before using the remote, it is important to press the **Input Selector** ❹ that corresponds to the device you wish to operate.
- The remote is capable of operating a wide variety of products made by other manufacturers using control codes that are programmed into the remote’s code library. As described on pages 76–78, it is simple to program the remote to operate your device by selecting the device type and brand, and then programming the correct set of codes for that brand.

❶ **Power Off (All):** Press this button to place the CVR700 (and the CVPD50) or a selected device in the Standby mode.

Press and hold this button to place all devices, including the CVR700, the CVPD50 and any other products whose codes you have programmed into the remote, into the Standby mode.

❷ **Power On (All):** Press this button to power on the CVR700 (and CVPD50) or another device you selected by first pressing the appropriate **Input Selector** ❹.

Press and hold this button to power on all devices, including the CVR700, the CVPD50 and any other products whose codes you have programmed into the remote.

❸ **LCD Information Display:** This two-line screen displays various information depending on the commands that have been entered into the remote. Normally, the upper line will display the current device (e.g., `DVD/MAIN`), and the lower line will display the name of the function key when pressed (e.g., `DISC SKIP`). See page 85 for information on renaming devices and keys.

❹ **Input Selectors:** Pressing one of these buttons will perform two actions. The CVR700 will switch to the source selected, and the remote will switch to the control codes for the selected source. In order to control the CVR700 again, press the **System Selector** ❻, and to control the CVPD50 screen, press the **Screen Selector** ❺.

Press and hold any of these buttons to power on the CVR700, the CVPD50 and the source device, and to begin play of the source device.

❺ **Screen Selector:** Press this button to select the control codes for the CVPD50 screen.

❻ **System Selector:** Press this button to select the control codes for the CVR700.

❼ **DSP Surround Mode Selector:** In System mode, press this button to select one of the DSP audio surround modes, such as Hall 1, Hall 2 or Theater. Each press of the button selects another mode. See page 62 for descriptions of the various surround modes.

❽ **Test Tone Button:** Press this button to activate the CVR700’s test tone that is used to calibrate speaker output levels. See pages 50–51 for more information on calibrating speaker output levels.

❾ **Logic 7 Mode/Sports Preset Button:** When the **System Selector** ❻ is active, press this button to select from among the available Logic 7 surround modes. (See page 62 for descriptions of the various surround modes.) When the **Screen Selector** ❺ is active, press this button to select the CVPD50 picture settings that were preset at the factory for optimal viewing of sporting events.

NOTE: The **Sports/Broadcast/ Movies Buttons** ❾㊾㊿ ▲3 optimize picture settings for a specific viewing medium. The Broadcast settings are the most neutral, balanced and accurate, and are optimized for clarity. The Movies settings are softer and less bright. The Sports settings are more vibrant and optimized for fast-moving action.

❿ **SPL Select Button:** This button activates the EzSet function to quickly and accurately calibrate the speaker output levels. The EzSet remote also has a manual SPL meter function to assist with manual setting of the output levels, or trimming the settings to an external source. See page 51 for more information on EzSet.

⓫ **Audio Input Selector:** Press this button to select one of the digital audio inputs 9 10 ㉒㉓㉔㉕㉗㉘㉙㉚ for use with its source or to select the analog audio input for that source. It is not possible to reassign a digital audio input to another source. See page 60 for more information on using digital inputs.

⓬ **Direct/Brightness/Window Button:** Press this button when the tuner is in use to directly enter a station's frequency, or when a CD is in use to directly enter a track number. After pressing this button, press the appropriate **Alphanumeric Keys** ㊽ to select a station or track.

When the Screen mode is active, press this button to adjust the brightness of the CVPD50. Use the ◀/▶ **Navigation Controls** ⓱▲6 to increase or decrease the brightness setting.

See page 55 for more information on screen adjustments. This button also activates the Window function for TiVo players. See your TiVo owner's manual for more information on the Window function.

⓭ **Tone Mode/Color/List Button:** This button controls the tone settings, enabling adjustment of the bass and treble boost or cut. You may also use it to disable the tone controls, for a "flat" response. The first press of the button displays a TONE IN message in the **Lower Display Line** E and on-screen display. To disable the controls, press the ▲/▼ **Navigation Controls** ⓱ until the display reads TONE OUT. To change the bass or treble settings, press this button again until the desired control appears in the **Lower Display Line** E and in the on-screen display, and then press the ▲/▼ **Navigation Controls** ⓱ until the desired setting appears.

When the Screen mode is active, press this button to adjust the color temperature of the CVPD50 display. See page 55 for more information on screen adjustments. This button also activates the List function for TiVo players. See your TiVo owner's manual for more information on the List function.

⓮ **OSD/Contrast Button:** Press this button when the System mode is active to access the setup menu for the CVR700's audio functions. When the Screen mode is active, press this button to adjust the contrast of the CVPD50 display. See page 55 for more information on screen adjustments.

⓯ **Angle/Tuning Mode Button:** When the DVD mode is active, press this button so select an alternate camera angle, if available on the current DVD.

When the tuner is in use, press this button to change the tuner scan mode between manual and automatic. When the button is pressed so that TUNE AUTO appears in the **Lower Display Line** E, only stations with acceptable signal quality will be tuned when scanning, and the tuner will play FM stations in stereo, when available. In the Auto mode, when the **Tuning Up/Down Buttons** 8 ㉒㊷▲27 ▲29 are pressed and held, the unit will automatically search for the next available station with good signal strength. When the **Tuning Mode Button** ⓯ is pressed so that TUNE MANUAL appears in the **Lower Display Line** E, pressing and holding the **Tuning Up/Down Buttons** 8 ㉒㊷▲27 ▲29 will cause the tuner to scan up or down through the frequencies and stop when the button is released, even if that frequency does not provide an acceptable signal. In either TUNE AUTO or TUNE MANUAL mode, each tap of the **Tuning Up/Down Buttons** 8 ㉒㊷▲27 ▲29 will cause the tuner to step through the frequencies in single-step increments.

When the FM band is in use, pressing the button so that the TUNE MANUAL mode is activated will enable you to tune stations with weak signals by changing to monaural reception. See page 64 for more information on tuner operation.

⓰ **Level/Guide Button:** This button is used to start the process of setting the CVR700's output levels to an external source, such as a favorite DVD. While the source is playing, press this button, and then press the ▲/▼ **Navigation Controls** ⓱ until the channel to adjust appears. Press the **Set Button** ⓳ to select that channel, and then use the ▲/▼ **Navigation Controls** ⓱ again to adjust the level setting. See page 64 for more information.

⓱ **▲/▼/◀/▶ Navigation Disc:** This single disc-like button is used to navigate the on-screen configuration menus, to scroll through options lists and to select various settings such as delay, speaker configurations, surround modes, digital inputs, etc. To use the button, simply press it left, right, up or down in the direction indicated by the ▲/▼/◀/▶ icons printed on the disc.

⓲ **Exit/Cancel Button:** When programming the remote, press this button to cancel the current function and return to the previous remote function. When using the remote to enter frequencies for direct tuner access or track numbers for direct access on a CD, press this button to clear previous entries.

⓳ **Set Button:** This button is used to enter settings into the CVR700's memory, or to confirm a selection while setting delay distances, speaker configuration and output level adjustments. It is used as the Enter or OK button for most other devices.

⓴ **Preset/Page Down/Reverse Skip Button:** This multipurpose button has a different function depending on the source in use.

When used with the tuner, this button scrolls through the preprogrammed station presets.

When used with optical sources, such as the internal disc changer or an external CD player, press this button once to return to the beginning of the current track, and again quickly to go to the beginning of the previous track.

The Page Down function is used with cable and satellite television to page quickly through on-screen menus.

When a disc containing JPEG still images is being played using the internal changer, press this button to scroll to the previous image.

㉑ **Volume Up/Down Controls:** To raise the volume, press towards the top of the disc, where it is marked ▲ Vol, and to lower the volume, press towards the bottom of the disc, where it is marked ▼ Vol. The left and right arrows on this disc have different functions, depending on the source in use. See **Channel/Slow Play Up/Down Control** ㊸ below for more information.

㉒ **Tuning Down/Reverse Search Button:** This button has different functions depending on whether the tuner or another source is in use.

Press this button when the tuner is in use to change the station to one with a lower frequency. Each tap of this button will decrease the frequency by one increment. When the tuner receives a strong enough signal for adequate reception, MANUAL TUNED will appear in the **Lower Display Line** E. When the tuner is in the Auto/Stereo mode, press and hold the button to cause the tuner to scan for the next lower station with acceptable signal strength and stop. The **Lower Display Line E** will indicate AUTO TUNED. When an FM Stereo station is tuned, the display will read AUTO ST TUNED. When the tuner is in Manual/Mono mode, you may press and hold this button to scan downward through the frequencies, and the tuner will stop immediately when you release this button, even if no acceptable signal is detected at that frequency.

See page 64 for more information on using the tuner.

When an optical player source, such as the internal DVD changer, is in use, press this button to search quickly in reverse through the current track or chapter. Depending on the type of disc used in the internal DVD changer, each additional press will cycle through the available scan speeds as follows (available scan speeds may differ for external optical source devices):

DVD-Audio and DVD-Video discs: 2x, 4x, 16x, 100x

CD and VCD discs: 2x, 4x, 8x

MP3 and WMA discs: 2x, 4x, 8x, 16x

See page 68 for more information on using the internal DVD changer's transport controls.

㉓ **Record/Stop/Pause Transport Controls:** These buttons have no function in the System or Screen modes, but are used with sources such as the internal disc changer or external DVD or CD players, tape or digital recorders or VCRs. When the internal disc changer is in use, pressing the Stop button once will place a DVD in resume mode, meaning that you may press the **Play Button ㊶** to continue playing the disc from the point where it was stopped. If you press the Stop button twice, play will resume from the beginning of the disc. Pressing the **Pause Button ㉓** will pause play, allowing you to step frame by frame forward through a DVD with each additional press of the **Pause Button ㉓**. Press the **Play Button ㊶**, to resume normal play, or press the **Stop Button ㉓** to stop.

㉔ **Status/Settings Button:** This button has different functions, depending on which device is in use.

Press it to display the CVR700 system's status, or an external DVD recorder's status.

When the internal disc changer or tuner, or an external cable television box is in use, press this button to access the current settings for the device.

For digital VCRs and game consoles, this button performs the Back function. For some PVRs/DVRs this button performs the Instant Replay function.

㉕ **Title/Freeze Button:** This button's function differs, depending on whether the internal disc changer (DVD/Main mode) or the Screen mode is active. To use this button, be careful to press only on the upper portion of the button, as other functions are accessed by pressing on the lower portion of the button.

In DVD/Main mode, press this button while a disc is playing to display the current title number. Press it again to jump to the next numbered title on the disc. This function may be available even when the disc's software prohibits title-jumping using the **Forward/Reverse Skip Buttons ⑳㊹**. Many DVD-Audio discs require you to press this button to access the disc menu.

In Screen mode, you may use this button to pause playback of the video picture while allowing the audio playback to continue uninterrupted, enabling you to capture an instance or frame of the video.

㉖ **Random/Letterbox Button:** This button's function differs, depending on whether the internal disc changer (DVD/Main mode) or the Screen mode is active. To use this button, be careful to press only on the upper portion of the button, as other functions are accessed by pressing on the lower portion of the button.

In DVD/Main mode, press this button for playback in random order. The Random function is not available when playing DVD-Audio or DVD-Video discs unless a playlist has been programmed, and it is not available at all for JPEG discs.

In Screen mode, when using the internal DVD changer, this button is only active if the Auto Resize feature is turned off via the SCREEN MENU (see page 57). This button performs the Letterbox function, which enables you to adjust the screen to eliminate black bars that may appear on the top and bottom or sides of the image due to the aspect ratio of the program material differing from the 16:9 aspect ratio of the CVPD50. In most cases, the CVR700's video processor is able to automatically detect the aspect ratio setting of the program material and adjust the display automatically to fill the screen. However, in some cases the material may be a movie displayed in widescreen (2.35:1) format, or the material may not contain embedded information necessary for the CVR700 to make an automatic adjustment. The available letterbox modes are:

16:9 – This setting is used to display 16:9 program material in the full-screen 16:9 mode on the CVPD50. This setting will also apply a linear (consistent) stretch to a 4:3 picture.

4:3 LTRBOX TO 16:9 – This mode is used to adjust an image which is designed to display a 16:9 movie on a 4:3 screen. In order to preserve the full width of the movie on a narrower screen, the image is reduced in size and black bars appear above and below it. This setting zooms in on the image, enabling it to fill the CVPD50's 16:9 screen without losing any portion of the image. The image is simply enlarged so that its two sides fit the edges of the CVPD50 16:9 screen and the black bars on top and bottom are cropped off. The image is stretched in a linear fashion (evenly throughout the frame).

2.35 LB TO 16:9 NL – This mode is used to adjust an image from a widescreen film which is actually at a wider ratio than the CVPD50's 16:9 ratio. In order to fit on the smaller screen, the image is compressed in a nonlinear fashion, but no portion of the image is lost.

2.35 LB TO 16:9 CROPPED – This mode is an alternative adjustment for a widescreen film. The image is not compressed or scaled in any way, but the outer edges are cropped, sacrificing a slight amount of the original content in exchange for 100% accurate image proportions.

4:3 HDTV TO 16:9 – As HDTV is new to the broadcast industry and there is still a considerable amount of older 4:3 standard recording and broadcast equipment in use, 4:3 material is sometimes broadcast in HD 16:9 format with black or other color bars on its sides. Since these bars are a part of the actual picture, conventional picture resizing techniques do not work in eliminating them. This setting is specifically designed to address this problem. It first crops the bars off the sides of the 16:9 picture to render it a 4:3 picture, and then performs a natural-looking nonlinear stretch to fill the entire 16:9 screen.

The Letterbox adjustment is temporary and will only apply to that disc. We encourage you to experiment with the modes to find one that suits you for a given presentation.

Additional aspect ratio adjustments are available using the **Frame Button ㉗**.

㉗ **Repeat/Frame Button:** This button's function differs depending on whether the internal disc changer (DVD/Main mode) or the Screen mode is active. To use this button, be careful to press only on the lower portion of the button, as other functions are accessed by pressing on the upper portion of the button.

In DVD mode, pressing this buttons accesses the Repeat functions. You may repeat a chapter, track, title, disc, file or programmed playlist. For JPEG discs, you may repeat one file or one folder, but the repeat disc function is not available.

In Screen mode, when using the internal DVD changer, this button is only active if the Auto Resize feature is turned off via the SCREEN MENU. This button performs the Frame function, which enables you to set the desired aspect ratio for viewing program materials, independent of the aspect ratio encoded on the disc. The following settings are available:

16:9 – This setting is used to display 16:9 program material in the full-screen 16:9 mode on the CVPD50.

4:3 TO 16:9 NL – This mode adjusts a 4:3 aspect ratio image to fill the CVPD50's 6:9 screen while creating a more natural-looking picture. This is accomplished by stretching the two sides of the picture more than the center of the picture where most of the content is.

4:3 LTRBOX TO 16:9 – This mode is used to adjust an image which is designed to display a 16:9 movie on a 4:3 screen. In order to preserve the full width of the movie on a narrower screen, the image is reduced in size and black bars appear above and below it. This setting zooms in on the image, enabling it to fill the CVPD50's 16:9 screen without losing any portion of the image. The image is simply enlarged so that its two sides fit the edges of the CVPD50 16:9 screen and the black bars on top and bottom are cropped off.

2.35 LB TO 16:9 NL – This mode is used to adjust an image from a widescreen film which is actually at a wider ratio than the CVPD50's 16:9 ratio. In order to fit on the smaller screen, the image is compressed, but no portion of the image is lost.

2.35 LB TO 16:9 CROPPED – This mode is an alternative adjustment for a widescreen film. The image is not compressed or scaled in any way, but the outer edges are cropped, sacrificing a slight amount of the original content in exchange for 100% accurate image proportions.

4:3 HDTV TO 16:9 – As HDTV is new to the broadcast industry, and there is still a lot of older 4:3 standard recording and broadcast equipment in use, 4:3 material is sometimes broadcast in HD 16:9 format with black or other color bars on its sides. Since these bars are a part of the actual picture, conventional picture resizing techniques do not work in eliminating them. This setting is specifically designed to address this problem. It first crops the bars off of the sides of the 16:9 picture to render it a 4:3 picture, and then performs a natural-looking nonlinear stretch to fill the entire 16:9 screen.

4:3 – This mode may be used with programs that are known to be in the 4:3 aspect ratio. The image's original aspect ratio is preserved unaltered, and black bars will appear on the left and right sides of the image to fill the CVPD50's 16:9 aspect ratio screen.

The difference between the Frame and Letterbox functions is that the Frame function allows access to the 4:3 and 4:3 TO 16:9 NL modes, which are mainly useful for materials originating in the 4:3 format.

NOTE: The Letterbox and Frame functions are not available with the internal DVD/CD changer unless the DVD Auto Resize function has been turned off using the screen setup menus. See page 57 for more information.

㉘ **A-B/Auto Button:** This button's function differs depending on whether the internal disc changer (DVD/Main mode) or the Screen mode is active. To use this button, be careful to press only on the lower portion of the button, as other functions are accessed by pressing on the upper portion of the button.

In the DVD mode, press this button once to select the beginning (point A), and again to select the end (point B) of a passage you wish to play repeatedly. Press the button again to end repeat playback. A-B repeat play is not available for VCD, MP3, WMA or JPEG discs.

In the Screen mode, this button selects automatic detection of the aspect ratio of program material from external sources, with playback in the 16:9 format. It will display 4:3 images stretched to fill the 16:9 screen. This function is not available with HD (480p or better) signals. If the 4:3 image is in letterbox format, with bars at the top and bottom of the screen, those bars will remain. See pages 13 and 27 for more information on configuring aspect ratios.

㉙ **Program/PVR Replay Button:** In the DVD/Main mode, press this button to access the screen for programming playlists. When a PVR (personal video recorder) is in use, press this button for replay of recorded materials. Refer to your PVR's owner's manual for more information.

㉚ **Disc Skip/PVR List Button:** In the DVD/Main mode, press this button to begin play of the next available disc in the changer. When a PVR is in use, press this button to list recorded materials. Refer to your PVR's owner's manual for more information.

㉛ **Audio/Screen Saver Button:** This button has different functions depending on whether it is pressed in DVD/Main mode or Screen mode.

In DVD/Main mode, pressing this button accesses the available audio soundtracks on a DVD. In some cases, the disc may simply contain different languages. Other discs may switch the audio format: e.g., to linear PCM or Dolby Digital 5.1. Pressing this button may sometimes provide access to commentary soundtracks.

In Screen mode, pressing this button places the CVPD50 display in Screen Saver mode, in which a JBL logo will appear to move around the screen. *It is important to turn on the Screen Saver any time a still image is likely to remain on screen for more than a few minutes, because a still image, such as a menu display, may be "burned" into the display, causing permanent damage to the plasma screen that is not covered under warranty.* This danger is not present when a moving image is displayed.

㉜ **Subtitle/TV/Video Button:** This button has different functions depending on whether it is pressed in DVD/Main mode or Screen mode.

In DVD/Main mode, press this button to select a subtitle language or to turn subtitling off.

In Screen mode, or when used with a video source device that is used for obtaining television broadcasts, such as a cable box, satellite receiver, TiVo, PVR, DVR or VCR, this button allows you to select between the television signal or one of the device's video inputs. See the device's owner's manual for more information on the use of this function.

㉝ **Light Button:** Press this button to activate the remote's backlight for ease of use in darkened rooms. The light will remain active for 7 seconds after this button has been pressed, and will remain lit for an additional 7 seconds after any other button on the remote has been pressed.

㉞ **Macro/A/B/C Buttons:** Press these buttons to store or recall a "Macro", a sequence of commands that you may program into the remote. See page 80 for more information on programming and using macros. These buttons have unique functions when used with game consoles, cable TV boxes and PVRs. See the owner's manual for the appropriate device for further information.

㉟ **Sleep/PIP Move Button:** This button has different functions depending on which device is in use when it is pressed.

In the System mode, the Sleep function is activated to automatically place the CVR700 and CVPD50 in Standby mode after a period of time. Each press of the button changes the time until turn-off: 90 minutes, 80 minutes, 70 minutes, 60 minutes, 50 minutes, 40 minutes, 30 minutes, 20 minutes, 10 minutes, Sleep mode Off, and then cycling back to 90 minutes, and so forth. When the Sleep timer is in use, the front-panel displays will dim to half brightness.

In the Screen mode, this button places the CVPD50 display in Standby mode, without affecting use of the CVR700. This function may be preferred for audio-only listening sessions to prevent burning the plasma display.

When a composite video output from a PIP-capable device, such as a cable box, has been connected to the **Picture-in-Picture Composite Video Input** ⑳, pressing this button enables you to move the PIP inset display around the CVPD50 screen, using the ▲/▼/◀/▶ **Navigation Disc** ⑰.

㊱ **Night Mode/PIP Channel Down Button:** This button's function differs depending on the device in use when it is pressed.

When pressed in the System mode, this button activates the Night mode, preserving dialogue (center-channel) intelligibility at low volume levels when available in specially encoded Dolby Digital sources.

When used with a compatible device whose video output has been connected to the **Picture-in-Picture Composite Video Input** ⑳, it changes the channel of the PIP device to the next lower one. It has no effect on the CVR700 or CVPD50.

㊲ **Disc Direct/PVR Live Button:** This button's function differs depending on which device is in use when it is pressed.

In DVD/Main mode, press it, and then press the numeric key corresponding to the position number of the disc you wish to play to immediately begin playback of that disc.

When a PVR is in use, this button switches to play of the signal currently being received by the PVR. See the PVR's owner's manual for more information.

㊳ **Remote Menu/PIP Channel Up Button:** This button's function differs depending on whether it is pressed when a picture-in-picture source is in use.

In System mode, this button accesses the menu system for the remote control, enabling you to program product codes, use the EzSet speaker calibration system, record macros, rename functions, and perform other functions, as described on pages 76 through 91.

When used with a compatible device whose video output has been connected to the **Picture-in-Picture Composite Video Input** ⑳, pressing this button changes the channel of the PIP device to the next higher one. It has no effect on the CVR700 or CVPD50.

㊴ **DVD Setup/PIP On-Off/PIP Swap Button:** This button's function differs depending on whether it is used with the internal DVD changer, or with a source whose video output has been connected to the **Picture-in-Picture Composite Video Input** ⑳.

When used with the DVD changer, this button accesses the DVD setup menu and enables you to configure the DVD changer.

When used in Screen mode with a PIP source connected, press this button once to turn on the PIP function, and again to turn it off. Pressing and holding this button for several seconds causes the main source to appear in the PIP inset display, and the PIP source to appear in the main display. Pressing and holding the button again returns the PIP source to the inset, and the main source to the main display.

㊵ **JBL On Screen Library™/ Favorite Button:** This button performs different functions depending on whether it is used with the internal DVD changer or another source.

In DVD/Main mode, this button accesses the JBL On Screen Library, which displays on screen a thumbnail image and description of each disc currently loaded in the CVR700's internal changer, including disc type and title if available. Use the ▲/▼/◀/▶ **Navigation Controls** ⑰ and the **Set Button** ⑲ to conveniently select and play any loaded disc.

When used with cable television boxes or satellite receivers, pressing this button scrolls through your list of preprogrammed favorite channels.

㊶ **Play Transport Control Button:** This button is used with the internal DVD changer or an external DVD player, VCR, tape deck, digital recorder, CD player or any other device with a transport mechanism to begin playback.

㊷ **Tuning Up/Forward Search Button:** This button has different functions depending on whether the tuner or another source is in use.

Press this button when the tuner is in use to change the station to one with a higher frequency. Each tap of this button will increase the frequency by one increment. When the tuner receives a strong enough signal for adequate reception, MANUAL TUNED will appear in the **Lower Display Line** **E**. When the tuner is in the Auto/Stereo mode, press and hold the button to cause the tuner to scan for the next higher station with acceptable signal strength and stop. The **Lower Display Line** **E** will indicate AUTO TUNED. When an FM Stereo station is tuned, the display will read AUTO ST TUNED. When the tuner is in Manual/Mono mode, you may press and hold this button to scan upward through the frequencies, and the tuner will stop immediately when you release this button, even if no acceptable signal is detected at that frequency. See page 64 for more information on using the tuner.

When an optical player source, such as the internal DVD changer, is in use, press this button to search quickly forward through the current track or chapter. Depending on the type of disc used in the internal DVD changer, each additional press will cycle through the available scan speeds as follows (available scan speeds may differ for external optical source devices):

DVD-Audio and DVD-Video discs: 2x, 4x, 16x, 100x

CD and VCD discs: 2x, 4x, 8x

MP3 and WMA discs: 2x, 4x, 8x, 16x

See page 68 for more information on using the internal DVD changer's transport controls.

㊸ **Channel/Slow Play Up/Down Control:** These controls use the ◀/▶ icons on the same disc as the **Volume Up/Down Controls ㉑**. The left and right arrows have different functions, depending on the source in use.

When a disc containing JPEG still images is being played using an external disc player, press the right side of this button to advance to the next image on the disc or the left side of this button to return to the previous image. (When using the internal changer, the **Page Up/Down Buttons ⑳㊹** perform this function.)

When a cable television box, satellite receiver, HDTV tuner or TiVO device is in use, press the right side of this button to tune in to the next higher channel, or the left side to tune in to the next lower channel.

When the internal DVD changer or an external DVD player is in use and a DVD is playing, press the right side of this button once to switch to the DVD slow forward play mode. Each additional press of the right side of the button will cycle through the available slow-play speeds of 1/2x, 1/4x and 1/8x. Pressing the left side of the button switches to the DVD slow reverse play mode. Additional presses of the left side of the button cycles through the available slow-play speeds of 1/2x, 1/4x and 1/8x. No slow-play speeds are available for CDs or other disc types.

㊹ **Preset/Page Up/Forward Skip Button:** This multipurpose button has a different function depending on the source in use.

When used with the tuner, this button scrolls through the preprogrammed station presets.

When used with optical sources, such as the internal disc changer or an external CD player, press this button once to skip to the beginning of the next track.

The Page Up function is used with cable and satellite television to page quickly through on-screen menus. When a disc containing JPEG still images is being played using the internal changer, press this button to scroll to the next image.

㊺ **Distance/Last Channel Button:** This button's function differs depending on whether it is used in the System mode or with another source.

In the System mode, this button is used to enter the distance from each speaker group to the listening position to avoid unnatural sound caused by the speakers being placed at varying distances from the listener, which could result in delay artifacts. When this button is pressed, DIST FRONT 10FT will appear in the **Lower Display Line E**, with FRONT and 10FT both flashing. Press the **Set Button ⑲** to select the front speaker group, and FRONT will stop flashing. Use the ▲/▼ **Navigation Controls ⑰** to select the desired distance, and press the **Set Button ⑲** again to enter it. Use the ▲/▼ **Navigation Controls ⑰** to scroll through the remaining speaker groups: CENTER, SIDE-S (side surround) or BACK-S (back surround – this setting may only be available after a 6.1-channel bitstream has been detected; for example, by playing a Dolby Digital EX DVD).

When used with most video sources, this button returns to the previously selected broadcast channel.

㊻ **Screen Setup/Disc Menu/Info Button:** This button is used in Screen mode to access the setup menus to configure and adjust the CVPD50 display screen. In DVD mode, this button accesses the menu on the current disc, enabling you to select the main feature or accompanying featurettes for playback or make other selections, depending on how the disc is programmed.

㊼ **Memory/Zoom Button:** When used with the tuner, press this button to enter the currently tuned radio station into a desired preset location using the **Alphanumeric Keys ㊽** to select the preset location between the numbers 01 and 30. Press this button a second time to store your selection. To recall that station later, select the tuner as the source, then either use the **Preset Up/Down Buttons ⑳㊹** to scroll to the desired preset station, or use the **Alphanumeric Keys ㊽** to directly enter the preset station location.

In DVD/Main mode, this button may be used while a DVD-Video disc is playing to zoom the picture so that it is enlarged. There are four steps to the zoom function, each progressively larger. Continue pressing the button to cycle through the steps and return to the normal view. Depending on the disc, you may also be able to use the ▲/▼/◀/▶ **Navigation Controls ⑰** to view different areas of the enlarged image.

㊽ **Alphanumeric Keys:** Select numbers by pressing these keys. When renaming functions or devices on the remote, these keys may be used to select letters.

㊾ **Stereo Mode/Movies Preset Button:** This button's function varies depending on whether the System or Screen mode has been selected.

In System mode, this button is used to select a stereo listening mode. When the button is pressed so that 2 CHANNEL STEREO appears in the **Lower Display Line E** and on-screen display, and the DSP and **Surround Off Surround Mode Indicators G** are lit, you will enjoy a two-channel presentation of the sound along with the benefits of bass management. Depending on whether your system is configured for 5.1 or 6.1/7.1 channels, the next press of the button will cause 5 CH STEREO and then 7 CH STEREO to appear, and the stereo signal will be routed to all five (or seven) speakers. See page 62 for more information on stereo playback modes.

In the Screen mode, pressing this button automatically adjusts the screen's picture settings to preprogrammed settings that are recommended as optimal for viewing movies.

NOTE: The **Sports/Broadcast/ Movies Buttons ⑨㊾㊿▲3** optimize picture settings for a specific viewing medium. The Broadcast settings are the most neutral, balanced and accurate, and are optimized for clarity. The Movies settings are softer and less bright. The Sports settings are more vibrant and optimized for fast-moving action.

㊿ **DTS Neo:6 Mode/Broadcast Preset Button:** This button's function varies depending on whether the System or Screen mode has been selected.

In System mode, this button is used to select a DTS Neo:6 audio surround mode. See page 62 for more information on the available DTS Neo:6 options.

In the Screen mode, pressing this button automatically adjusts the screen's picture settings to preprogrammed settings that are recommended as optimal for viewing broadcast television programs.

NOTE: The **Sports/Broadcast/ Movies Buttons** ⑨㊾㊿▲3 optimize picture settings for a specific viewing medium. The Broadcast settings are the most neutral, balanced and accurate, and are optimized for clarity. The Movies settings are softer and less bright. The Sports settings are more vibrant and optimized for fast-moving action.

(51) **DTS Digital Surround Mode Button:** In System mode, when a DTS-encoded digital source is playing, each press of this button will scroll through the available DTS audio surround modes. The specific choice of modes will vary according to the type of encoding on the disc and your system's speaker configuration (5.1-channel or 6.1/7.1-channel). See page 62 for more information on DTS modes.

(52) **Dolby Surround Mode Button:** In System mode, this button is used to select from the available Dolby audio surround modes. Each press of this button will select one of the Dolby Pro Logic II (available in 5.1-channel systems) or IIx (available in 6.1/7.1-channel systems) modes, Dolby 3 Stereo, or Dolby Digital when a Dolby Digital-encoded source is in use. Each press of this button will scroll through the available modes. See page 62 for more information on Dolby modes.

(53) **Mute Button:** Press this button to momentarily silence the CVR700. Press it again, or use the **Volume Up/Down Control** ㉑ to restore audio.

(54) **EzSet Microphone Sensor:** The microphone sensor that is used by the EzSet system is behind the three slots at the top of the remote control. When using EzSet to calibrate the CVR700, be certain that the slots are not covered. See page 51 for more information on EzSet.

(55) **IR Transmitter/Receiver:** The infrared emitters and receivers behind the plastic lens at the top of the remote communicate the remote codes to the CVR700 and other programmed devices. Be certain that the lens is not covered when using the remote, and point the lens toward the CVR700 for the best results. In learning mode, the remote receives IR codes to be learned through a receiver behind the lens. See page 78 for more information on learning remote codes.

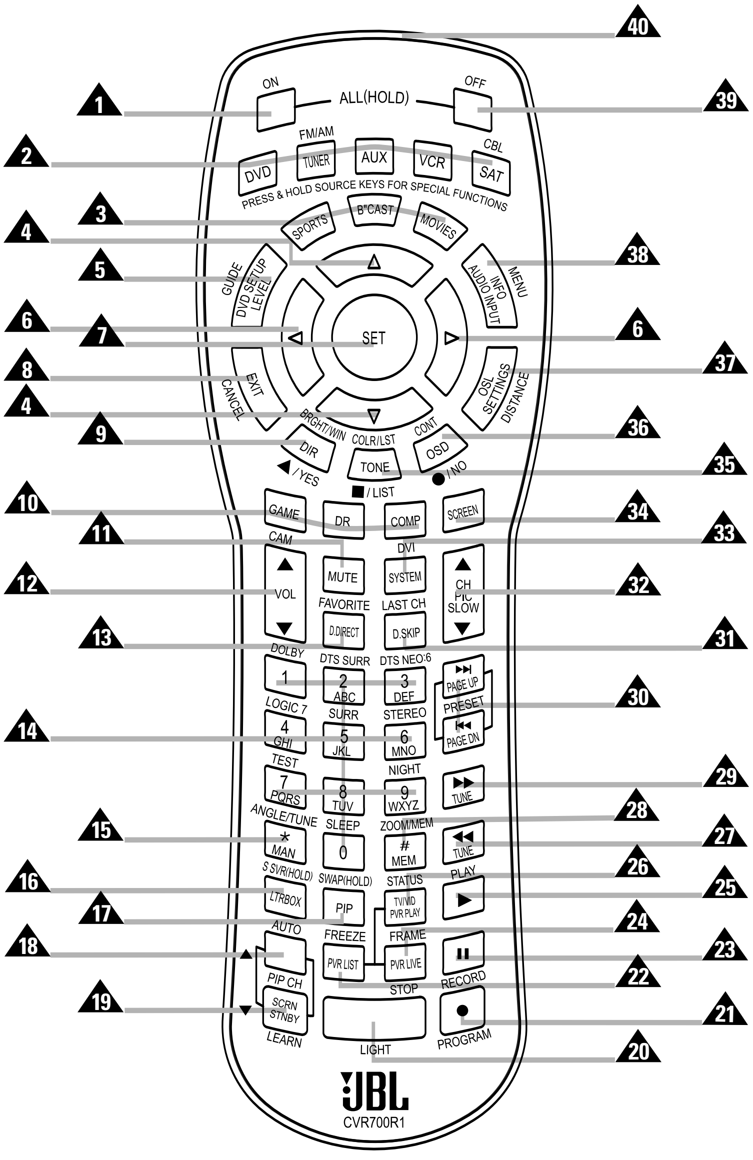
NOTE: DO NOT remove the rubber plug that is supplied to cover the jack on the upper right side of the remote. The jack is not active and is reserved for future use.

CVR700R1 REMOTE CONTROL FUNCTIONS

The CVR700R1 remote is capable of performing most of the same functions as the CVR700R2 remote control, which is intended mainly for system setup, but is smaller and easier to handle on a day-to-day basis. The most noticeable functions missing from the CVR700R1 remote are the LCD information screen, and the EzSet speaker calibration function.

As it is a programmable, learning remote that is capable of controlling the source devices in your system, you will need to program it separately from the CVR700R2 remote with the codes for your other components. It is already preprogrammed at the factory to control your CVR700 and its internal disc changer, as well as the CVPD50 screen.

1 Power On (All)
2 DVD/Tuner/Auxiliary/VCR/CBL/SAT Input Selectors
3 Sports, Broadcast and Movies Preset Selectors
4 ▲/▼ Navigation Buttons
5 Level/DVD Setup/Guide Button
6 ◀/▶ Navigation Buttons
7 Set Button
8 Exit/Cancel Button
9 Direct/Brightness/Window Button
10 Game/Digital Recorder/Computer Input Selectors
11 Mute Button
12 Volume Up/Down Control
13 Disc Direct/Favorite Button
14 Alphanumeric Keys*
15 Angle/Tuning Mode (Tune-Manual) Button
16 Screen Saver/Letterbox Button
17 PIP On-Off/PIP Swap Button
18 Auto/PIP Channel Up Button
19 Learn/Screen Standby/PIP Channel Down Button
20 Light Button
21 Program/Record Button
22 Freeze/PVR List Button
23 Pause Button
24 Frame/Stop/PVR Live Button
25 Forward Play Button
26 Status/TV/Video/PVR Play Button
27 Tuning Down/Reverse Search Button
28 Memory/Zoom Button
29 Tuning Up/Forward Search Button
30 Preset/Page Up/Down/Forward/ Reverse Skip Buttons
31 Disc Skip/Last Channel Buttons
32 Picture/Channel Up/Down and Slow Play Forward/Reverse Button
33 System Selector
34 Screen Selector
35 Tone Mode/Color/List Button
36 OSD/Contrast Button
37 JBL On Screen Library™/ Settings/Distance Button
38 Menu/Info/Audio Input Selector
39 Power Off (All)
40 IR Transmitter/Receiver


40
ON
ALL(HOLD)
OFF
1
39
FM/AM
CBL
2
DVD
TUNER
AUX
VCR
SAT
PRESS & HOLD SOURCE KEYS FOR SPECIAL FUNCTIONS
3
4
SPORTS
B'CAST
MOVIES
5
38
GUIDE
DVD SETUP
LEVEL
MENU
INFO
AUDIO INPUT
6
7
SET
6
8
EXIT
CANCEL
OSL
SETTINGS
DISTANCE
37
4
9
BRGHT/WIN
DIR
◀ / YES
COLR/LST
TONE
■ / LIST
CONT
OSD
● / NO
36
35
10
GAME
DR
COMP
SCREEN
34
11
CAM
DVI
33
12
VOL
MUTE
FAVORITE
SYSTEM
LAST CH
CH
PIC
SLOW
32
13
D.DIRECT
D.SKIP
31
DOLBY
DTS SURR
DTS NEO:6
1
2 ABC
3 DEF
PAGE UP
PRESET
PAGE DN
30
14
LOGIC 7
SURR
STEREO
4 GHI
5 JKL
6 MNO
TEST
NIGHT
7 PQRS
8 TUV
9 WXYZ
TUNE
29
28
ANGLE/TUNE
SLEEP
ZOOM/MEM
15
* MAN
0
# MEM
TUNE
27
26
16
S SVR(HOLD)
SWAP(HOLD)
STATUS
PLAY
LTRBOX
PIP
TV/VID PVR PLAY
25
17
AUTO
FREEZE
FRAME
24
18
PVR LIST
PVR LIVE
23
PIP CH
STOP
RECORD
22
19
SCRN STNBY
LEARN
LIGHT
PROGRAM
21
20
JBL
CVR700R1

*The alphanumeric keys function as such for all devices except in System mode of the CVR700, where pressing each key will access certain audio functions as follows:

1: Dolby Surround Mode Selector
2: DTS Digital Surround Mode Selector
3: DTS Neo:6 Surround Mode Selector
4: Logic 7 Surround Mode Selector
5: DSP Surround Mode Selector
6: Stereo Mode Selector
7: Test Tone
8: No additional function
9: Night Mode
0: Sleep Timer

IMPORTANT NOTE: The JBL Cinema Vision remotes are powerful devices capable of controlling virtually your entire home cinema system. In comparison to a traditional system of the same capabilities, these remotes can replace up to 10 separate remote controls and therefore end the confusion and clutter associated with having a different remote for each of your system components. In order to achieve this goal, the JBL Cinema Vision remotes are designed to assume the duties of controlling different devices within your system by first pressing one of the 10 **Selector Buttons** ④⑥⑦ ▲2 ▲10 ▲33 ▲34. Pressing one of these buttons places your remote control in a different "page", where the remote buttons are assigned control functions available for that specific purpose. For example, all internal DVD changer functions are accessed by pressing the **DVD Button** ④ ▲2 first, and all CVPD50 Plasma Display functions are accessed by pressing the **Screen Button** ⑤▲34 first, and all overall audio and system commands for the CVR700 are accessed by first pressing the **System Button** ⑥ ▲33. Throughout this manual, you will see references to the system being active in DVD, SYSTEM, SCREEN, CABLE/SAT, or other modes. This means that one of these 10 keys is to be pressed first to place your remote in the prescribed mode before accessing any specific controls. It is important to always remember to press the appropriate page selection key before trying to access any specific functions for a system or source. This may take a little bit of discipline and practice at first, but it should become second nature in a very short time.

Each function on the CVR700R1 remote has the same effect on the CVR700, CVPD50 and other devices as described earlier for the CVR700R2 remote control functions; however, functions may be combined on different keys. Each key has an independent function depending on the device currently in use. Be careful to press the input selector, or the System or Screen mode selector, corresponding to the device you wish to control prior to pressing a button to be sure that your button press will operate the desired function. Refer to the function list on pages 96 through 97 for information on which function is assigned to a given key for a given device.

▲1 **Power On (All):** Press this button to power on the CVR700, the CVPD50 or another device you selected by first pressing the appropriate **Input Selector** ▲2 ▲10.

Press and hold this button to place all devices, including the CVR700, the CVPD50 and any other products whose codes you have programmed into the remote, into the Standby mode.

▲2 **DVD/Tuner/Auxiliary/VCR/CBL/SAT Input Selectors:** Pressing one of these buttons will perform two actions. First, the CVR700 will switch to the source selected. Then, the remote will switch to the control codes for the selected source. In order to control the CVR700 again, press the **System Selector** ▲33, and to control the CVPD50 screen, press the **Screen Selector** ▲34.

Press and hold any of these buttons to power on the CVR700, the CVPD50 and the source device, and to begin play of the source device.

▲3 **Sports, Broadcast and Movies Preset Selectors:** When the **Screen Selector** ▲33 is active, press any of these buttons to select the CVPD50 picture settings that were preset at the factory for optimum viewing of sporting events, broadcast television programs or movies.

NOTE: The **Sports/Broadcast/ Movies Buttons** ⑨㊾㊿▲3 optimize picture settings for a specific viewing medium. The Broadcast settings are the most neutral, balanced and accurate, and are optimized for clarity. The Movies settings are softer and less bright. The Sports settings are more vibrant and optimized for fast-moving action.

▲4 ▲/▼ **Navigation Buttons:** These buttons are used to navigate the on-screen configuration menus, to scroll through options lists and to select various settings such as delay, speaker configurations, surround modes, digital inputs, etc.

▲5 **Level/DVD Setup/Guide Button:** This button is used to start the process of setting the CVR700's output levels to an external source, such as a favorite DVD. While the source is playing, press this button, and then press the ▲/▼ **Navigation Controls** ▲4 until the channel to adjust appears. Press the **Set Button** ▲7 to select that channel, and then use the ▲/▼ **Navigation Controls** ▲4 again to adjust the level setting. See page 64 for more information.

In DVD mode, this button accesses the DVD setup menu described on page 53, and enables you to configure the DVD changer.

▲6 ◀/▶ **Navigation Buttons:** These buttons are used to navigate the on-screen configuration menus, to scroll through options lists and to select various settings such as delay, speaker configurations, surround modes, digital inputs, etc.

▲7 **Set Button:** This button is used to enter settings into the CVR700's memory, or to confirm a selection while setting delay times, speaker configuration and output level adjustments. It is used as the Enter or OK button for most other devices.

▲8 **Exit/Cancel Button:** When programming the remote, press this button to cancel the current function and return to the previous remote function. When using the remote to enter frequencies for direct tuner access or track numbers for direct access on a CD, press this button to clear previous entries.

▲9 **Direct/Brightness/Window Button:** Press this button when the tuner is in use to directly enter a station's frequency, or when a CD is in use to directly enter a track number. After pressing this button, press the appropriate **Alphanumeric Keys** ㊽ to select a station or track.

When the Screen mode is active, press this button to adjust the brightness of the CVPD50. See page 55 for more information on screen adjustments. This button also activates the Window function for TiVo players. See your TiVo owner's manual for more information on the Window function.

NOTE: The **Sports/Broadcast/ Movies Buttons** ⑨㊾㊿▲3 optimize picture settings for a specific viewing medium. The Broadcast settings are the most neutral, balanced and accurate, and are optimized for clarity. The Movies settings are softer and less bright. The Sports settings are more vibrant and optimized for fast-moving action.

▲10 **Game/Digital Recorder/Computer Input Selectors:** Pressing one of these buttons will perform two actions. First, the CVR700 will switch to the source selected. Then, the remote will switch to the control codes for the selected source. In order to control the CVR700 again, press the **System Selector** ▲33, and to control the

CVPD50 screen, press the **Screen Selector △34**.

Press and hold any of these buttons to power on the CVR700, the CVPD50 and the source device, and to begin play of the source device.

△11 Mute Button: Press this button to momentarily silence the CVR700. Press it again, or use the **Volume Up/Down Control △12** to restore audio.

△12 Volume Up/Down Control: To raise the volume, press towards the top of the button (marked ▲); to lower the volume, press towards the bottom of the button, where it is marked ▼.

△13 Disc Direct/Favorite Button: In DVD mode, press this button, and then press the numeric key corresponding to the position number of the disc you wish to play to immediately begin playback of that disc.

When used with cable television boxes or satellite receivers, pressing this button scrolls through your list of preprogrammed favorite channels.

△14 Alphanumeric Keys: Select numbers or letters by pressing these keys, except in System mode (when operating the audio section of the CVR700), in which case each key has the following functions:

1: Dolby Surround Mode Selector: This button is used to select from the available Dolby audio surround modes. Each press of this button will select one of the Dolby Pro Logic II (available in 5.1-channel systems) or IIx (available in 6.1/7.1-channel systems) modes, Dolby 3 Stereo, or Dolby Digital when a Dolby Digital-encoded source is in use. Each press of this button will scroll through the available modes. See page 62 for more information on Dolby modes.

2: DTS Digital Surround Mode Selector: When a DTS-encoded digital source is playing, each press of this button will scroll through the available DTS audio surround modes. The specific choice of modes will vary according to the type of encoding on the disc and your system's speaker configuration (5.1-channel or 6.1/7.1-channel). When a DTS source is not in use, this button has no function in System mode. See page 62 for more information on DTS modes.

3: DTS Neo:6 Surround Mode Selector: This button is used to select a DTS Neo:6 audio surround mode. See page 62 for more information on the available DTS Neo:6 options.

4: Logic 7 Surround Mode Selector: Press this button to select from among the available Logic 7 surround modes. (See page 62 for descriptions of the various surround modes.)

5: DSP Surround Mode Selector: Press this button to select one of the DSP audio surround modes, such as Hall 1, Hall 2 or Theater. Each press of the button selects another mode. See page 62 for descriptions of surround modes.

6: Stereo Mode Selector: This button is used to select a stereo listening mode. When the button is pressed so that SURROUND OFF appears in the **Lower Display Line E**, the CVR700 will operate in a bypass mode with true, fully analog, two-channel left/right stereo mode with no surround processing or bass management, as opposed to other modes where digital processing is used. When the button is pressed so that SURROUND OFF appears in the **Lower Display Line E**, and the DSP and **Surround Off Surround Mode Indicators G** are lit, you will enjoy a two-channel presentation of the sound along with the benefits of bass management. Depending on whether your system is configured for 5.1 orf 6.1/7.1 channels, the next press of the button will cause either 5 CH STEREO or 7 CH STEREO to appear, and the stereo signal will be routed to all five (or seven) speakers. See page 62 for more information on stereo playback modes.

7: Test Tone: Press this button to activate the CVR700's test tone that is used to calibrate speaker output levels. See pages 50 through 52 for more information on calibrating speaker output levels. (The EzSet function is not available on the secondary remote.)

8: No Additional Function

9: Night Mode: This button activates the Night mode, which preserves dialogue (center-channel) intelligibility at low volume levels when available in specially encoded Dolby Digital sources.

0: Sleep Timer: The Sleep function is activated to automatically place the CVR700 and CVPD50 in Standby mode after a period of time. Each press of the button changes the time until turn-off: 90 minutes, 80 minutes, 70 minutes, 60 minutes, 50 minutes, 40 minutes, 30 minutes, 20 minutes, 10 minutes, Sleep mode Off, and then cycling back to 90 minutes, and so forth. When the Sleep timer is in use, the front-panel displays will dim to half brightness.

△15 Angle/Tuning Mode (Tune-Manual) Button: When the DVD mode is active, press this button to select an alternate camera angle if available on the current DVD.

When the tuner is in use, press this button to change the tuner mode between manual and automatic. When the button is pressed so that TUNE AUTO appears in the **Lower Display Line E**, only stations with acceptable signal quality will be tuned when scanning, and the tuner will play FM stations in stereo, when available. In the Auto mode, when the **Tuning Up/Down Buttons 8㉒㊷△27 △29** are pressed, the unit will automatically search for the next available station with good signal strength. When this button is pressed so that TUNE MANUAL appears in the **Lower Display Line E**, pressing and holding the **Tuning Up/Down Buttons 8㉒㊷△27 △29** will cause the tuner to scan up or down and stop when you release the button, even if there is no acceptable signal at that frequency. In either Auto or Manual mode, each tap of the **Tuning Up/Down Buttons 8㉒㊷△27 △29** will move the frequency up or down in single-step increments. When the FM band is in use, pressing the button so that the Tune Manual mode is activated will enable you to tune stations with weak signals by changing to monaural reception. See page 64 for more information on tuner operation.

△16 Letterbox/Screen Saver Button: This button performs the Letterbox function, which enables you to adjust the screen to eliminate black bars that may appear on the top and bottom or sides of the image due to the aspect ratio of the program material differing from the 16:9 aspect ratio of the CVPD50. In most cases, the CVR700's video processor is able to automatically detect the aspect ratio setting of the program material and adjust the display automatically to fill the screen. However, in some cases the material may be a movie displayed in widescreen format, or the material may not contain embedded information necessary for the CVR700 to make an automatic adjustment. The available letterbox modes are:

16:9 – This setting is used to display 16:9 program material in the full-screen 16:9 mode on the CVPD50. This setting will also apply a linear (consistent) stretch to a 4:3 picture.

4:3 LTRBOX TO 16:9 – This mode is used to adjust an image which is designed to display a 16:9 movie on a 4:3 screen. In order to preserve the full width of the movie on a narrower screen, the image is reduced in size and black bars appear above and below it. This setting zooms in on the image, enabling it to fill the CVPD50's 16:9 screen without losing any portion of the image. The image is simply enlarged so that its two sides fit the edges of the CVPD50 16:9 screen and the black bars on top & bottom are cropped off. The image is stretched in a linear fashion (evenly throughout the frame).

2.35 LB TO 16:9 NL – This mode is used to adjust an image from a widescreen film which is actually at a wider ratio than the CVPD50's 16:9 ratio. In order to fit on the smaller screen, the image is compressed in a nonlinear fashion, but no portion of the image is lost.

2.35 LB TO 16:9 CROPPED – This mode is an alternative adjustment for a widescreen film. The image is not compressed or scaled in any way, but the outer edges are cropped, sacrificing a slight amount of the original content in exchange for 100% accurate image proportions.

4:3 HDTV TO 16:9 – As HDTV is new to the broadcast industry and there is still a considerable amount of older 4:3 standard recording & broadcast equipment in use, 4:3 material is sometimes broadcast in HD 16:9 format with black or other color bars on its sides. Since these bars are a part of the actual picture, conventional picture resizing techniques do not work in eliminating them. This setting is specifically designed to address this problem. It first crops the bars off the sides of the 16:9 picture to render it a 4:3 picture, and then performs a natural-looking nonlinear stretch to fill the entire 16:9 screen.

The Letterbox adjustment is temporary, and will only apply to that disc. We encourage you to experiment with the modes to find one that suits you for a given presentation.

NOTE: The Letterbox and Frame functions are not available with the internal DVD/CD changer unless the DVD Auto Resize function has been turned off using the Screen setup menus. See page 57 for more information.

When pressed and held for at least two seconds, this button places the CVPD50 display screen in Screen Saver mode, in which a JBL logo will appear to move around the screen. It is important to turn on the Screen Saver any time a still image is likely to remain on screen for more than a few minutes, as a still image, such as a menu display, may be "burned" into the display, causing permanent damage to the plasma screen that is not covered under warranty. This danger is not present when a moving image is displayed.

▲17 **PIP On-Off/PIP Swap Button:** When used with a PIP source whose composite video output has been connected to the **Picture-in-Picture Composite Video Input ⑳**, press this button once to turn on the PIP function, and again to turn it off.

Pressing and holding this button for several seconds causes the main source to appear in the PIP inset display, and the PIP source to appear in the main display. Pressing and holding the button again returns the PIP source to the inset, and the main source to the main display.

▲18 **Auto/PIP Channel Up Button:** In the Screen mode, this button selects automatic detection of the aspect ratio of program material, with playback in the 16:9 format, inserting black bars on the right and left sides as required for 4:3 images, unless you have configured your system to display 4:3 images stretched to fill the 16:9 screen. This function is not available with HD (480p or better) signals. See pages 13 and 27 for more information on configuring aspect ratios.

When used with a PIP-capable device whose composite video output has been connected to the **Picture-in-Picture Composite Video Input ⑳**, pressing this button changes the channel of the PIP device to the next higher one. It has no effect on the CVR700 or CVPD50.

▲19 **Learn/Screen Standby/PIP Channel Down Button:** Press this button to begin the process of "learning" the codes from another product's remote into the CVR700 secondary remote. (See page 93 for more information on using the remote's learning function.)

When used in the Screen mode, this button places the CVPD50 display in Standby mode, without affecting use of the CVR700. This function may be preferred for audio-only listening sessions to aviod burning a still image into the plasma display.

When used with a PIP-capable device whose composite video output has been connected to the **Picture-in-Picture Composite Video Input ⑳**, pressing this button changes the channel of the PIP device to the next lower one. It has no effect on the CVR700 or CVPD50.

▲20 **Light Button:** Press this button to activate the remote's backlight for ease of use in darkened rooms. The light will remain active for 7 seconds after this button has been pressed, and will remain lit for an additional 7 seconds after any other button on the remote has been pressed.

▲21 **Program/Record Button:** In the DVD mode, press this button to access the screen for programming play lists.

The Record function is used when the **DR Input Selector** ▲10 has been activated for use with an external recorder.

▲22 **Freeze/PVR List Button:** In Screen mode, you may use this button to pause playback of the video picture while allowing the audio playback to continue uninterrupted.

When a PVR is in use, press this button to list recorded materials. Refer to your PVR's owner's manual for information.

▲23 **Pause Button:** This button may be used with the internal disc changer or with an external DVD or CD player or other playback device. Pressing the Pause button will pause play, allowing you to step forward frame by frame through a DVD with each press of the **Forward Skip Button** ▲30. Press the **Pause Button** again, or the **Play Button** ▲25, to resume normal play.

▲24 **Frame/Stop/PVR Live Button:** In Screen mode, this button performs the Frame function, which enables you to set the desired aspect ratio for viewing program materials, independent of the aspect ratio encoded on the disc. The following settings are available through the Frame function:

16:9 – This setting is used to display 16:9 program material in the full-screen 16:9 mode on the CVPD50.

4:3 TO 16:9 NL – This mode adjusts a 4:3 aspect ratio image to fill the CVPD50's 16:9 screen while creating a more natural looking picture. This is accomplished by stretching the two sides of the picture more than the center of the picture where most of the content is.

4:3 LTRBOX TO 16:9 – This mode is used to adjust an image which is designed to display a 16:9 movie on a 4:3 screen. In order to preserve the full width of the movie on a narrower screen, the image is reduced in size and black bars appear above and below it. This setting zooms in on the image, enabling it to fill the CVPD50's 16:9 screen without losing any portion of the image. The image is simply enlarged so that its two sides fit the edges of the CVPD50 16:9 screen and the black bars on top and bottom are cropped off.

2.35 LB TO 16:9 NL – This mode is used to adjust an image from a widescreen film which is actually at a wider ratio than the CVPD50's 16:9 ratio. In order to fit on the smaller screen, the image is compressed, but no portion of the image is lost.

2.35 LB TO 16:9 CROPPED – This mode is an alternative adjustment for a widescreen film. The image is not compressed or scaled in any way, but the outer edges are cropped, sacrificing a slight amount of the original content in exchange for 100% accurate image proportions.

4:3 HDTV TO 16:9 – As HDTV is new to the broadcast industry and there are still a considerable amount of older 4:3 standard recording and broadcast equipment in use, 4:3 material is sometimes broadcast in HD 16:9 format with black or other color bars on its sides. Since these bars are a part of the actual picture, conventional picture resizing techniques do not work in eliminating them. This setting is specifically designed to address this problem. It first crops the bars off of the sides of the 16:9 picture to render it a 4:3 picture, and then performs a natural-looking nonlinear stretch to fill the entire 16:9 screen.

4:3 – This mode may be used with programs that are known to be in the 4:3 aspect ratio. The image's original aspect ratio is preserved unaltered, and black bars will appear on the left and right sides of the image to fill the CVPD50's 16:9 aspect ratio screen.

The difference between the Frame and Letterbox functions is that the Frame function allows access to the 4:3 and 4:3 TO 16:9 NL modes, which are mainly useful for materials originating in the 4:3 format.

NOTE: The Letterbox and Frame functions are not available with the internal DVD/CD changer unless the DVD Auto Resize function has been turned off using the Screen setup menus. See page 57 for more information.

The stop function may be used with the internal disc changer or with an external DVD or CD player or other playback device. When the internal disc changer is in use, pressing the Stop button once will place a DVD in resume mode, meaning that you may press the **Play Button** ㊶ ▲25 to continue playing the disc from the point where it was stopped. If you press the Stop button twice, play will resume from the beginning of the disc.

When a PVR is in use, this button switches to play of the signal currently being received by the PVR. See the PVR's owner's manual for more information.

▲25 **Forward Play Button:** This button may be used with the internal disc changer or with an external DVD or CD player or other playback device.

▲26 **Status/TV/Video/PVR Play Button:** Press it to display the CVR700 system's status, or an external DVD recorder's status.

In Screen mode, or when used with a video source device that is used for obtaining television broadcasts, such as a cable box, satellite receiver, TiVo, PVR, DVR or VCR, this button allows you to select between the television signal or one of the device's video inputs. See the device's owner's manual for more information on the use of this function.

▲27 **Tuning Down/Reverse Search Button:** Press this button when the tuner is in use to change the station to one with a lower frequency. Each tap of this button will decrease the frequency by one increment. When the tuner receives a strong enough signal for adequate reception, MANUAL TUNED will appear in the **Lower Display Line** 🅴. When the tuner is in the Auto/Stereo mode, press and hold the button to cause the tuner to scan for the next lower station with acceptable signal strength, and stop. The **Lower Display Line** 🅴 will indicate AUTO TUNED. When an FM Stereo station is tuned, the display will read AUTO ST TUNED. When the tuner is in Manual/Mono mode, you may press and hold this button to scan downward through the frequencies, and the tuner will stop immediately when you release this button, even if no acceptable signal is detected at that frequency. See page 64 for more information.

When an optical player source, such as the internal DVD changer, is in use, press this button to search quickly in reverse through the current track or chapter. Depending on the type of disc used in the internal DVD changer, each additional press will cycle through the available scan speeds as follows (available scan speeds may differ for external optical source devices):

DVD-Audio and DVD-Video discs: 2x, 4x, 16x, 100x

CD and VCD discs: 2x, 4x, 8x

MP3 and WMA discs: 2x, 4x, 8x, 16x

See page 68 for more information on using the internal DVD changer's transport controls.

▲28 **Memory/Zoom Button:** When used with the tuner, press this button to enter the currently tuned radio station into a desired preset location using the **Numeric Keys** ▲14 to select the preset location between the numbers 01 and 30. Press this button a second time to store your selection. To recall that station later, select the tuner as the source, then either use the **Preset Up/Down Buttons** ▲30 to scroll to the desired preset station, or use the **Numeric Keys** ▲14 to directly enter the preset station location.

In DVD mode, this button may be used while a DVD-Video disc is playing to zoom the picture so that it is enlarged. There are four steps to the zoom function, each progressively larger. Continue pressing the button to cycle through the steps and return to the normal view. Depending on the disc, you may also be able to use the ▲/▼/◀/▶ **Navigation Controls** ▲4 ▲6 to view different areas of the enlarged image.

▲29 **Tuning Up/Forward Search Button:** Press this button when the tuner is in use to change the station to one with a higher frequency. Each tap of this button will increase the frequency by one increment. When the tuner receives a strong enough signal for adequate reception, MANUAL TUNED will appear in the **Lower Display Line** 🅴. When the tuner is in the Auto/Stereo mode, press and hold the button to cause the tuner to scan for the next higher station with acceptable signal strength, and stop. The **Lower Display Line** 🅴 will indicate AUTO TUNED. When an FM Stereo station is tuned, the display will read AUTO ST TUNED. When the tuner is in Manual/Mono mode, you may press and hold this button to scan downward through the frequencies, and the tuner will stop immediately when you release this button, even if no acceptable signal is detected at that frequency. See page 64 for more information on using the tuner.

When an optical player source, such as the internal DVD changer, is in use, press this button to search quickly forward through the current track or chapter. Depending on the type of disc used in the internal DVD changer, each additional press will cycle through the available scan speeds as follows (available scan speeds may differ for external optical source devices):

DVD-Audio and DVD-Video discs: 2x, 4x, 16x, 100x

CD and VCD discs: 2x, 4x, 8x

MP3 and WMA discs: 2x, 4x, 8x, 16x

See page 68 for more information on using the internal DVD changer's transport controls.

△30 **Preset/Page Up/Down/Forward/Reverse Skip Buttons:** When used with the tuner, these buttons scroll through the preprogrammed station presets.

When used with optical sources, such as the internal disc changer or an external CD player, press the forward button once to skip to the beginning of the next track. Press the reverse button once to return to the beginning of the current track, and once again quickly to skip to the beginning of the previous track. When the **Pause Button** △23 has been pressed while a DVD is playing, the picture advances frame by frame each time the forward skip button is pressed.

The Page Up and Down functions are used with cable and satellite television to page quickly through on-screen menus.

△31 **Disc Skip/Last Channel Buttons:** In the DVD mode, press this button to begin play of the next available disc in the changer.

When used with most video sources, this button returns to the previously selected broadcast channel.

△32 **Picture/Channel Up/Down and Slow Play Forward/Reverse Button:** When a disc containing JPEG still images is being played using the internal disc changer, press the top of this button to advance to the next image on the disc or the bottom of this button return to the previous image.

When a cable television box, satellite receiver, HDTV tuner or TiVo device is in use, press the top of this button to tune in to the next higher channel, or the bottom to tune in to the next lower channel.

When the internal DVD changer or an external DVD player is in use, press the top of this button once to switch to the DVD slow forward play mode. Each additional press of the top of the button will cycle through the available slow-play speeds of 1/2x, 1/4x and 1/8x. Pressing the bottom of the button switches to the DVD slow reverse play mode. Additional presses of the bottom of the button cycles through the available slow-play speeds of 1/2x, 1/4x and 1/8x. No slow-play speeds are available for CDs or other disc types.

△33 **System Selector:** Press this button to select the control codes for the CVR700.

△34 **Screen Selector:** Press this button to select the control codes for the CVPD50 screen.

△35 **Tone Mode/Color/List Button:** This button controls the tone settings, enabling adjustment of the bass and treble boost or cut. You may also use it to disable the tone controls, for a "flat" response. The first press of the button displays a TONE IN message in the **Lower Display Line** E. To disable the controls, press the ▲/▼ **Navigation Controls** △4 until the display reads TONE OUT. To change the bass or treble settings, press this button again until the desired control appears in the **Lower Display Line** E and in the on-screen display, and then press the ▲/▼ **Navigation Controls** △4 until the desired setting appears.

When the Screen mode is active, press this button to adjust the picture settings of the CVPD50 display. See page 55 for more information on screen adjustments. This button also activates the List function for TiVo players. See your TiVo owner's manual for more information on the List function.

NOTE: The **Sports/Broadcast/ Movies Buttons** ⑨㊾㊿△3 optimize picture settings for a specific viewing medium. The Broadcast settings are the most neutral, balanced and accurate, and are optimized for clarity. The Movies settings are softer and less bright. The Sports settings are more vibrant and optimized for fast-moving action.

△36 **OSD/Contrast Button:** Press this button when the System mode is active to access the setup menu for the CVR700's audio functions. When the Screen mode is active, press this button to adjust the contrast of the CVPD50 display. See page 55 for more information on screen adjustments.

NOTE: The **Sports/Broadcast/ Movies Buttons** ⑨㊾㊿△3 optimize picture settings for a specific viewing medium. The Broadcast settings are the most neutral, balanced and accurate, and are optimized for clarity. The Movies settings are softer and less bright. The Sports settings are more vibrant and optimized for fast-moving action.

△37 **JBL On Screen Library/Settings/Distance Button:** In DVD mode, this button accesses the JBL On Screen Library, which displays on screen a thumbnail image and description of each disc currently loaded in the CVR700's internal changer, including disc type and title if available. Use the ▲/▼/◀/▶ **Navigation Controls** △4△6 and the **Set Button** △7 to conveniently select and play any loaded disc.

In the System mode, this button is used to enter the distance from each speaker to the listening position to avoid unnatural sound caused by the speakers being placed at varying distances from the listener, which could result in delay artifacts. When this button is pressed, DIST FRONT 10FT will appear in the **Lower Display Line** E, with FRONT and 10FT both flashing. Press the **Set Button** △7 to select the front speaker group, and FRONT will stop flashing. Use the ▲/▼ **Navigation Controls** △4 to select the desired distance, and press the **Set Button** △7 again to enter it. Use the ▲/▼ **Navigation Controls** △4 to scroll through the remaining speaker groups: CENTER, SIDE-S (side surround) or BACK-S (back surround, available only after a 6.1-channel bitstream has been detected).

△38 **Menu/Info/Audio Input Selector:** In DVD mode, this button accesses the menu on the current disc, enabling you to select the main feature or accompanying featurettes for playback or make other selections, depending on how the disc is programmed.

In System mode, press this button to assign one of the **Digital Audio Inputs** 9 10 ㉒㉓㉔㉕㉗㉘㉙㉚ to a source. See page 60 for more information on using digital inputs.

39 **Power Off (All):** Press this button to place the CVR700 and CVPD50, or a selected device, in the Standby mode.

Press and hold this button to place all devices, including the CVR700, the CVPD50 and any other products whose codes you have programmed into the remote, into the Standby mode.

40 **IR Transmitter/Receiver:** The infrared emitters and receivers behind the plastic lens at the top of the remote communicate the remote codes to the CVR700 and other programmed devices. Be certain that the lens is not covered when using the remote, and point the lens toward the CVR700 for the best results. In learning mode, the remote receives IR codes to be learned through a receiver behind the lens. See page 93 for more information on learning remote codes.

BASIC OPERATION

Once you have completed the initial setup and configuration of the JBL Cinema Vision system, it is simple to operate and enjoy. The following instructions will help you maximize the enjoyment of your new home theater system:

Turning the CVR700 and CVPD50 On or Off

Plug the CVPD50 and CVR700 power cords into unswitched AC wall outlets. When using the system for the first time, you must make sure that the power switch on the underside of the CVPD50 next to the AC power cord is switched on to the “1” position. Use a mirror to assist you in locating the switch and ascertaining whether it is on or off. This places the CVPD50 in a Standby mode, as indicated by the amber color of the LED located on the front of the screen, below the picture. In addition, the LED in the middle of the **Main Power On/Off Switch** 1 on the CVR700 will turn red.

Once the units are in Standby, you may begin a listening session by pressing the **Main Power On/Off Switch** 1, which will turn on both the CVR700 and the CVPD50, or press the **Power On (All) Button** ❷ ▲1 . If you hold it for 3 seconds, all devices programmed into the remote will also turn on. The LED in the center of the **Main Power On/Off Switch** 1 will turn orange, and the LED on the front of the CVPD50 will turn green. This will turn the CVR700 on and return it to the input source that was last used.

The system may also be turned on from Standby by pressing and holding any of the **Input Selector Buttons** ❹ ▲2 ▲10 . This will not only power on the CVR700, CVPD50 and any source unit associated with that button, it will also begin play of the currently loaded disc if the internal DVD/CD changer was selected as the source.

NOTE: After pressing one of the **Input Selector Buttons** ❹ ▲2 ▲10 to turn the unit on, press the **System Selector** ❻ ▲33 to set the remote control to the CVR700 functions. Press the **DVD Input Selector** ❹ ▲2 to control the internal DVD/CD changer.

To turn the unit off at the end of a listening session, simply press the **Main Power On/Off Control** 1 on the front panel or the **Power Off Button** ❶ ▲39 on the remote. You may also press and hold the **Power Off (All) Button** ❶ ▲39 to turn off any external source units. The LED indicator in the center of the **Main Power On/Off Control** 1 will turn red, and the LED on the front of the CVPD50 will turn amber. When the remote is used to turn the unit “off” it is actually placing the system in a Standby mode, as indicated by the red color of the LED on the CVR700 and the amber color of the LED on the CVPD50.

To program the CVR700 for automatic turn-off, press the **Sleep Button** ㉟ ▲14 on the remote. Each press of the button will decrease the time before shut-down in the following sequence: 90 minutes, 80 minutes, 70 minutes, 60 minutes, 50 minutes, 40 minutes, 30 minutes, 20 minutes, 10 minutes, Sleep Timer Off. The sleep time will be displayed in the **Lower Display Line** E, and it will count down until the time has elapsed.

When the programmed sleep time has elapsed, the system will automatically turn off. The CVR700’s front-panel display will dim to one-half brightness when the Sleep function is programmed. To cancel the Sleep function, press and hold the **Sleep Button** ㉟ ▲14 until the information display returns to normal brightness; the Sleep indicator numbers will disappear and the words SLEEP OFF will appear in the **Lower Display Line** E.

When you will be away from home for an extended period of time it is always a good idea to completely turn the unit off by unplugging the CVR700, and switching off the master power switch located on the underside of the CVPD50 next to the power plug. **NOTE:** Preset memories should be retained indefinitely.

Source Selection

- To select a source, press any of the **Input Selector Buttons** ❹ ▲2 ▲10 .
- The input source may also be changed by slowly rotating the front-panel **Input Source Selector** 17. Each step, which you may feel as a tactile detent or click, will move the input selection through the available inputs.
- As the input is changed, the CVR700 will automatically switch to the digital input (if selected), surround mode, speaker configuration, and night mode status that were entered during the configuration process for that source.
- The **Front-Panel Audio/Video Inputs** 14 may be used to temporarily connect a device such as a video game or camcorder to your home entertainment system. This source is called the Game/Cam input source on the remote controls and in the CVR700’s menu system.
- As the input source is changed, the new input name will appear momentarily as an on-screen banner display along with the audio input and video screen format. The input name will also appear in the **Main Information Display** 21
- When an audio source is selected, the last video input used remains routed to the **VCR Video Outputs** ❶, the **Digital Recorder Video Ouptuts** ⑩ and the **Video Monitor Outputs** ⑭. This permits you to simultaneously view and listen to different sources.
- When a video source is selected, the video signal for that input will be routed to the CVPD50 for viewing, and if it is a composite or S-video source, the video signal will be routed to the **Video Monitor Output** ❶ and may be viewed on an external TV monitor connected to the CVR700.

Volume Control

- Adjust the volume to a comfortable level using the front-panel **Volume Control** ⑳ or remote **Volume Up/Down Buttons** ㉑ ▲12 .
- To temporarily silence all speaker outputs, press the **Mute Button** (53) ▲11 . This will interrupt the output to all speakers and the headphone jack, but it will not affect any recording or dubbing that may be in progress. When the system is muted, the word MUTE will flash in the **Main Information Display** 21. Press the **Mute Button** (53) ▲11 again, or adjust the volume to return to normal operation.
- The unit’s tone controls may be taken out of the signal path by pressing the **Tone Mode Button** ⑬ ▲35 . The first press will show a message in the **Lower Display Line** E with the current status of the tone controls. The system default is TONE IN, which indicates that the bass and treble controls are active. Press the ▲/▼ **Navigation Control** ⑰ ▲4 to change the setting to TONE OUT, which is “flat” response without the tone controls being active.
- When the tone controls are active, the bass and treble boost/cut may be adjusted by first pressing the **Tone Mode Button** ⑬ ▲35 until the desired setting (BASS MODE or TREBLE MODE) appears in the

Lower Display Line 🅴. Next, use the ▲/▼ **Navigation Control** ⑰ ▲4 to change the setting as desired. The unit will return to normal operation within 5 seconds after the setting is changed.

- For private listening, plug the 1/4" stereo phone plug from a pair of stereo headphones into the front-panel **Headphone Jack** 15. When the headphone's plug is connected, the word HEADPHONE will scroll once across the **Lower Display Line** 🅴 and all speakers will be silenced. When the headphone plug is removed, the audio feed to the speakers will be restored.

Surround Mode Selection

One of the most important features of the CVR700 is its ability to reproduce a full multichannel sound field from digital sources, analog matrix surround-encoded programs and standard stereo programs.

Selection of a surround mode is based on personal taste, as well as the type of program source material being used. For example, motion pictures or TV programs bearing the logo of one of the major surround-encoding processes, such as Dolby Surround or DTS Stereo may be played in either the Dolby Digital, Dolby Pro Logic II Movie, Dolby Pro Logic IIx Movie, DTS Neo:6 Cinema, or Logic 7 Cinema surround modes, depending on the source material.

NOTE: Once a program has been encoded with matrix surround information, it retains the surround information as long as the program is available in stereo. Thus, movies with surround sound may be decoded via any of the analog surround modes such as Dolby Pro Logic II or IIx Movie, Logic 7 Cinema or DTS Neo:6 Cinema, when they are broadcast via conventional TV stations, cable, pay-TV and satellite transmission. Also, a number of TV programs, sports broadcasts and radio dramas are recorded in surround sound.

Even when a program is not listed as carrying intentional surround information, you may find that the Dolby Pro Logic II, Logic 7, DTS Neo:6 and the Hall or Theater modes often deliver enveloping surround presentations through the use of the natural information present in all stereo recordings.

Surround modes may be changed at any time by using either the front panel or remote control. To select a new surround mode from the front panel, press the **Surround Mode Selector** 18 repeatedly until the desired surround mode is selected.

To select a surround mode using the remote, press the button for the surround mode group that includes the mode you wish to choose: **Dolby** (52) ▲14, **DTS Digital** (51) ▲14, **DTS Neo:6** ㊶ ▲14, **Logic 7** ⑨ ▲14, **Stereo** (52) ▲14 or **DSP Surround** ⑦ ▲14. The first press of the button will show the current mode from that group if it is already in use, or the first available mode if you are currently using another mode. To cycle through the available modes in that group, press the button again until the desired mode appears in the **Lower Display Line** 🅴 and in the front-panel **Surround Mode Indicators** 🅶.

The Dolby Digital, Dolby Digital EX, DTS 5.1, DTS-ES Matrix and DTS-ES Discrete modes may only be selected when a digital input is in use. In addition, when a digital source is present, the CVR700 will automatically select and switch to the correct mode, regardless of the mode that has been previously selected. For more information on selecting digital sources, see the Digital Audio Playback section below.

When a DVD-Audio disc is in use, there is no surround processing, as the analog output signal from a DVD-Audio disc is carried straight through to the preamp section.

To listen to a program in traditional two-channel stereo, using the front left and right speakers only (plus the subwoofer, if installed and configured), press the **Stereo Mode Select Button** ㊾ ▲14 until SURROUND OFF appears in the **Lower Display Line** 🅴. From the front panel, press the **Surround Mode Selector** 18 until SURROUND OFF appears in the **Lower Display Line** 🅴.

Digital Audio Playback

Digital audio is a major advancement over analog surround processing systems. It delivers up to six discrete channels, and each channel reproduces full frequency range (20Hz to 20kHz) and offers dramatically improved dynamic range and significant improvements to signal-to-noise ratios. In addition, digital systems have the capability to deliver an additional channel that is specifically devoted to low-frequency information. This is the ".1" channel referred to when you see these systems described as "5.1," "6.1" or "7.1." The bass channel is separate from the other channels, but since it is intentionally bandwidth-limited, sound designers have given it that unique designation.

Dolby Digital

Dolby Digital is a standard part of DVD, available on specially encoded LD discs and satellite broadcasts, and is a part of the high-definition television (HDTV) system.

An optional, external RF demodulator is required to use the CVR700 to listen to the Dolby Digital soundtracks available on laser discs. Connect the RF output of the LD player to the demodulator and then connect the digital output of the demodulator to the **Optical** or **Coaxial Inputs** ㉒㉔㉕㉗㉘㉙ 9 10 of the CVR700 corresponding to the source (e.g., AUX) you wish to use for your LD player. No demodulator is required for use with DVD players or DTS-encoded laser discs. The CVR700's internal DVD/CD changer will automatically detect and play any Dolby DVD loaded into it, and no external connections need to be made. However, the CVR700 is not capable of playing a laser disc, and an external LD player must be connected to the CVR700.

DTS

DTS is a digital audio system capable of delivering 5.1 or 6.1 discrete or matrix sound field reproduction. Although both DTS and Dolby Digital are digital, they use different methods of encoding the signals, and thus they require different decoding circuits to convert the digital signals back to analog.

DTS-encoded soundtracks are available on select DVD and LD discs, as well as on audio-only DTS discs. The CVR700's internal DVD/CD changer will automatically detect and play any DTS-encoded DVD loaded into it, and no external connections need to be made. If you are connecting an external device to the CVR700, be aware that you may use any LD or CD player equipped with a digital output to play DTS-encoded discs with the CVR700. All that is required is to connect the player's output to either an **Optical** or **Coaxial Input** on the rear panel ㉒㉔㉕㉗㉘㉙ or front panel 9 10.

In order to listen to DVDs encoded with DTS soundtracks, the DVD player must be compatible with the DTS signal, which is indicated by the "DTS Digital Out" logo on the player's front panel. Some early DVD players were not able to play DTS-encoded DVDs. This does not indicate a problem with the CVR700, as those players cannot pass through the DTS signal. If you're in doubt as to the capability of your DVD player to handle DTS discs, consult the player's owner's manual.

NOTE: Many DVD players have a default setting that does not pass through the DTS data, even though the machine is capable of doing so. If your external DVD player has the "DTS Digital Out" logo but does not trigger DTS playback in the CVR700, change the player's settings in the "Audio" or "Bitstream" configuration menu so that DTS playback is enabled. The method for doing this will vary with each player. In some cases, the proper menu choice will be "Original," while in others it will be "DTS." Consult the owner's manual for your player to find the specific information to find the proper setting.

Selecting a Digital Source

To use either digital mode, you must have properly connected a digital source to the CVR700. Connect the digital outputs from external DVD players, HDTV receivers, satellite systems or CD players to the **Optical** or **Coaxial Inputs** ㉒㉔㉕㉗㉘㉙ 9 10. In order to provide a backup signal and a source for analog stereo recording, the analog outputs provided on digital source equipment should also be connected to the corresponding inputs on the CVR700 rear panel (e.g., connect the analog stereo audio output from a digital recorder to the **Digital Recorder Inputs** ❾ on the rear panel when you connect the source's digital outputs).

If you have not already configured an input for a digital source using the on-screen menus as shown on page 46, first select the desired input using the remote or front-panel controls, as outlined in this manual. Next, press the **Audio Input Button** ⓫ 38 and then using the **▲/▼ Navigation Control** ⓱ 4, choose the OPTICAL, COAXIAL or ANALOG input you wish to assign to that source, as it appears in the **Upper Display Line** H. When the digital source is playing, the CVR700 will automatically detect which type of digital data stream is being decoded and display that information in the **Upper Display Line** H. However, the CVR700 will not automatically detect which digital or analog audio connection you have made.

Digital Bitstream and Surround Mode Indicators

When a digital source is playing, the CVR700 senses the type of bitstream data that is present. Using this information, the correct surround mode will automatically be selected. For example, DTS bitstreams will cause the unit to switch to DTS decoding, and Dolby Digital bitstreams will enable Dolby Digital decoding.

When the unit senses PCM data from CDs or LDs, you may select any of the standard surround modes, such as Dolby Pro Logic II or Logic 7. Since the range of available surround modes is dependent on the type of digital data that is present, the CVR700 shows you what type of signal is present. This will help you to understand the choice of modes.

When a digital source is first detected, the CVR700 will indicate the type of bitstream being received by switching to the appropriate surround mode, depending on the bitstream and how you have configured your system. The **Speaker/Channel Input Indicators** F will light to indicate which channels are contained in the digital bitstream. For example, for a Dolby Digital EX bitstream, the L, C, R, SL, SR, SBL, SBR and LFE indicators will light with a line between the SBL and SBR boxes to indicate that those two channels are in mono. This is the only indication of the number of channels present in the signal. The **Surround Mode Indicator** G that identifies the bitstream will also light. The **Lower Display Line** E will indicate the surround mode you have assigned to that source using the AUDIO MODE submenu system or the remote.

When Dolby Digital 5.1 or DTS or DTS-ES signals are being played, the CVR700 will automatically switch to the proper surround mode, and no other processing may be selected. When a Dolby Digital signal with 4.0 or 2.0 channels is detected, you may select any Dolby surround mode.

When the digital audio data stream has been interrupted or is no longer present, such as when a DVD disc is paused or stopped, the **Speaker/Channel Input Indicators** F will flash to indicate that no signal is present. This is normal and does not indicate any problem with your system.

PCM Playback

PCM is the abbreviation for Pulse Code Modulation, which is the type of digital signal used for standard CD playback, and other non-Dolby Digital and non-DTS digital sources such as Mini-Disc. When a PCM signal is detected, the **Lower Display Line** E will briefly show a message with the letters PCM, in addition to a readout of the sampling frequency of the digital signal.

In most cases, this will be PCM 44.1kHz or PCM 48kHz, though in the case of specially mastered, high-resolution audio discs, you will see a PCM 96kHz indication.

During PCM playback, you may select any surround mode except one of the Dolby Digital or DTS/DTS-ES modes.

Speaker/Channel Indicators

In addition to the bitstream indicators, the CVR700 features channel-input indicators that show how many channels of digital information are being received and/or whether the digital signal is interrupted (see Figure 41).

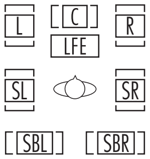


Figure 41

These indicators are the L/C/R/LFE/SL/SR/SBL/SBR letters that are inside the center boxes of the **Speaker/Channel Input Indicators** F on the front panel. When a standard analog signal is in use, only the "L" and "R" indicators will light, as analog signals have only left and right channels.

Digital signals may have two, five, six or seven channels, depending on the program material, its method of transmission and the way in which it was encoded. When a digital signal is playing, the letters in these indicators will light in response to the signal being received. It is important to note that although Dolby Digital, for example, is referred to as a "5.1" system, not all Dolby Digital DVDs or programs are encoded for 5.1. Thus, it is sometimes normal for a DVD with a Dolby Digital soundtrack to trigger only the "L" and "R" indicators.

NOTE: Many DVD discs are recorded with both "5.1" and "2.0", and Dolby Digital and DTS versions of the same soundtrack. When playing a DVD, always be certain to check the type of material on the disc. Most discs show this information using icons on the back of the disc jacket. When a disc offers multiple soundtrack choices, you may have to make some adjustments (usually with the "Audio Select" button or in a menu screen on the disc) to access the full 5.1

feed to the CVR700 or to select between Dolby Digital or DTS. It is also possible for the type of signal feed to change durinh the course of a DVD's playback. In some cases, the previews or special material will be recorded in 2.0 audio, while the main feature is available in 5.1 audio. The CVR700 will automatically sense changes to the bitstream and channel count and reflect them in these indicators.

The letters used by the **Speaker/ Channel Input Indicators** 🅵 also flash to indicate when a bitstream has been interrupted. This will happen when a digital input source is selected before the playback starts, or when a digital source such as a DVD is paused. The flashing indicators remind you that the playback has stopped due to the absence of a digital signal and not through any fault of the CVR700. This is normal, and the digital playback will resume once the playback is started again.

When a 6.1-channel mode, such as Dolby Digital EX, is detected, a line will appear connecting the SBL and SBR channels to reflect that the same signal is being outputted through both back surround channels. The line will disappear when a 7.1-channel mode, such as Logic 7, is in use. At this time, there are no 7.1-channel digital formats available.

Night Mode
A special feature of Dolby Digital is the Night mode, which enables specially encoded Dolby Digital input sources to be played back with full digital intelligibility while reducing the minimum peak level by 1/4 to 1/3. This prevents abruptly loud transitions from disturbing others, without reducing the impact of the digital source. The Night mode is available only when Dolby Digital signals with special data are being played.

The Night mode may be engaged when a Dolby Digital DVD is playing by pressing the **Night Mode Button** ㊱ △14 on the remote. Next, press the ▲/▼ **Navigation Button** ⑰ △4 to select either the middle range or full compression versions of the Night mode. To turn the Night mode off, press the ▲/▼ **Navigation Button** ⑰ △4 until the message in the lower third of the video display and in the **Lower Display Line** 🅴 reads NIGHT MODE OFF.

The Night mode may also be selected to always be on at either level of compression using the options in the DOLBY SURROUND menu. See page 47 for information on using the menus to set this option.

MP3 and WMA Compressed Audio Playback
The CVR700 is one of the few audio/ video components equipped with onboard decoding of the MP3 and WMA audio formats used by computers and portable audio devices. By offering MP3 and WMA decoding, the CVR700 is able to deliver precise conversion of the digital signals to an analog output, along with the benefits of listening to the MP3 or WMA audio through the CVR700's high-power amplifier and the speakers from your surround system, rather than the smaller speakers and low-powered amplifiers typically used with computers.

To take advantage of the CVR700's MP3 and WMA capabilities, simply insert a disc containing MP3 or WMA audio files into the changer drawer. When the digital signal is available, the **Lower Display Line** 🅴 will indicate that an MP3 or WMA bitstream is present, and the audio will begin playing.

NOTES:

- The CVR700 is only capable of playing signals in the MP3 (MPEG 1/Layer 3) format, or in the Windows Media Audio (WMA) format compatible with Windows Media player version 9 or greater. It is not compatible with other computer audio codecs.
- Due to the wide variation in MP3 and WMA formats and encoding speeds, it is possible that the CVR700 may not be compatible with all MP3 or WMA files. Some may produce unacceptable results or may not be decoded. This is not a fault of either the computer or the CVR700, but rather a by-product of the unpredictable nature of compressed-audio playback.
- Even when your computer does not have a digital output that is compatible with the CVR700, you may connect the analog audio output available on virtually all computers to one of the analog audio inputs using an optional adaptor cable that converts the stereo mini plug commonly used for computer audio connections to the left/right RCA jacks used on the CVR700. Connecting your computer to the CVR700 will enable you to take advantage of the high-quality audio reproduction possible with a home theater system, as well as enable the use of surround processing modes such as Logic 7, to greatly enhance downloaded or streaming audio playback.

IMPORTANT NOTES ON DIGITAL PLAYBACK:

- When the digital playback source is stopped, or in a pause, fast forward or search mode, digital audio data will momentarily stop, and the channel position letters inside the **Speaker/ Channel Input Indicators** 🅵 will flash. This is normal and does not indicate a problem with either the CVR700 or the source machine. The CVR700 will return to digital playback as soon as the data is available.
- Some source devices, particularly cable set-top boxes, will switch back and forth between digital and analog audio outputs, depending on the channel being watched. To avoid losing sound with this type of product, it is recommended that you connect both the digital and analog audio outputs of the source to the CVR700, with the digital audio input set as the default following the steps shown on page 46. If the digital data stream is interrupted and the sound mutes, you will need to manually switch to the analog audio input by pressing the **Audio Input Button** ⑪ △38 and using the ▲/▼ **Navigation Buttons** ⑰ △4 to select the analog audio input for the current source. Press the **Set Button** ⑲ △7 to enter your selection and return to normal operation. When switching to a digital channel, follow the same procedure, except select the appropriate digital audio input for the source. This switching is not a fault of either the CVR700 or the cable box, as it is caused by the use of different audio technologies on different channels by the cable company or program supplier.
- Although the CVR700 will decode virtually all current DVD movies, CDs and HDTV sources, it may not be compatible with future digital sources.
- When a digital source is playing, you may not be able to select some of the analog surround modes such as Dolby Pro Logic II, Dolby Pro Logic IIx, Hall, Theater or Logic 7.
- When a Dolby Digital or DTS source is playing, it is not possible to make an analog recording using the **Digital Recorder Analog Audio/Video Outputs** ⑩ or the

VCR Analog Audio/Video Outputs ①. However, the digital signals will be passed through to the **Digital Audio Outputs** ⑦㉑㉖.

Tuner Operation

The CVR700's tuner is capable of tuning AM, FM and FM Stereo broadcast stations. Stations may be tuned manually, or they may be stored as favorite station presets and recalled from a 30-position memory.

Station Selection

1. Press the **Tuner Button** ④ ▲2 on the remote to select the tuner as an input. The tuner may be selected from the front panel by turning the **Source Selector** ⑰ until the tuner is active.
2. Press the **Tuner Button** ④ ▲2 or **Tuner Band Selector** 11 to switch between AM and FM so that the desired frequency band is selected.
3. When using the front-panel controls, the **Tuning Mode Button** 6 is used to select the function of the **Tuning/Preset Up/Down Buttons** 8. Press the **Tuning Mode Button** 6 to toggle between TUNING and PRESET. Press the **Tuning Mode Selector** ⑮ ▲15 on the remotes to select manual or automatic tuning.

   In either mode, each press of the **Tuning Selectors** 8㉒㊷ ▲27 ▲29 will increase or decrease the frequency by one increment. When the **Tuning Mode Selector** ⑮ ▲15 has been pressed so that AUTO TUNE appears in the **Lower Display Line** E, pressing and holding the **Tuning Selectors** 8㉒㊷ ▲27 ▲29 will cause the tuner to scan for the next higher or lower frequency with an acceptable signal. Release the button, and AUTO TUNED will appear in the **Lower Display Line** E to indicate that a station has been tuned. AUTO ST TUNED will appear in the **Lower Display Line** E for FM stereo stations.

   When the **Tuning Mode Selector** ⑮ ▲15 has been pressed so that MANUAL TUNE appears in the **Lower Display Line** E, pressing and holding the **Tuning Selectors** 8㉒㊷ ▲27 ▲29 will cause the tuner to scan up or down through all frequencies, stopping when you release the button, even if no acceptable signal is present. The message MANUAL TUNED will nevertheless appear in the **Lower Display Line** E.
4. Stations may also be tuned directly in either the automatic or manual mode. To enter a station's frequency directly, first select the AM or FM band as desired be pressing the **Tuner Button** ④ ▲2. Next, press the **Direct Button** ⑫ ▲9. Within 5 seconds of when DIRECT IN scrolls in the **Lower Display Line** E, enter the station frequency by pressing the **Numeric Keys** ㊽ ▲14. If you press an incorrect button while entering a direct frequency, press the **Exit/Cancel Button** ⑱ ▲8 to start over.

Preset Tuning

Using the remote, up to 30 stations may be stored in the CVR700's memory for easy recall using the front-panel controls or the remote.

To enter a station into the memory, first tune the station using the steps outlined above. Then:

1. Press the **Memory Button** 12㊼ ▲28; two underlines will flash in the **Upper Display Line** H.
2. Within 5 seconds, press the **Numeric Keys** ㊽ ▲14 corresponding to the memory location where you wish to store this station's frequency. The preset number will appear in the **Upper Display Line** H.
3. Press the **Memory Button** 12㊼ ▲28 again to store the preset station.
4. Repeat the process after tuning any additional stations to be preset.

NOTE: By its nature, plasma display devices tend to interfere with AM radio reception. In any event, as mentioned elsewhere in this manual, it is preferable to leave the screen off to avoid burn-in when no video signal is present and the startup screen may be displayed for a long time. Therefore, when the AM tuner band is selected as the source, the CVPD50 will automatically enter the standby mode. To wake it, simply select any other source (including the FM tuner band).

Recalling Preset Stations

- To manually select a station previously entered in the preset memory, press the **Numeric Keys** ㊽ ▲14 for the desired station's memory location.
- To manually scroll through the list of preset stations, press the **Preset Stations Selector Button** 8⑳㊹ ▲30 on the front panel or remote. When using the front-panel controls, remember to first press the **Tuning Mode Selector** 6 to select Preset as the function of the **Tuning/Preset Buttons** 8.

Recording

In normal operation, the audio or video source selected for listening through the CVR700 is sent to the record outputs. This means that any program you are watching or listening to may be recorded simply by placing machines connected to the **Digital Recorder Analog Audio/Video Outputs** ⑩ or **VCR Analog Audio/Video Outputs** ① in the record mode.

When a digital audio recorder is connected to the **Digital Audio Outputs** ㉑㉖7, you are able to record the digital signal using a CD-R, MiniDisc or other digital recording system.

NOTES:

- The digital outputs are active only when a digital signal is present, and they do not convert an analog input to a digital signal, or change the format of the digital signal. In addition, the digital recorder must be compatible with the output signal. For example, the PCM digital input from a CD player may be recorded on a CD-R or MiniDisc, but Dolby Digital or DTS signals may not.
- Please obey the copyright restrictions on any material you copy. Unauthorized duplication of copyrighted materials is prohibited by law.

Output Level Trim Adjustment

Normal output level adjustment for the CVR700 is established using the test tone, as outlined on pages 50–52. In some cases, however, it may be desirable to adjust the output levels using program material such as a test disc, or a selection you are familiar with. Additionally, the output level for the subwoofer can only be adjusted using this procedure.

To adjust the output levels using program material, first set the reference volume for the front left and front right channels using the **Volume Control** 20㉑ ▲12.

If you are using a disc with test signals or an external signal generator as the source used when the output levels are being trimmed, you may use the remote as an SPL meter to guide you to the correct level settings. To use the EzSet remote as an SPL meter, follow the instructions on page 51.

Once the reference level has been set, press the **Level Button** ⑯ △5 and SP LEVEL FL 0 will appear in the **Lower Display Line** 🅴 with FL 0 flashing. To change the level, first press the **Set Button** ⑲ △7 to select the front left (FL) channel, and then use the ▲/▼ **Navigation Controls** ⑰ △4 to raise or lower the level. DO NOT use the volume control, as this will alter the reference setting.

Once the change has been made, press the **Set Button** ⑪ △7 and then press the ▲/▼ **Navigation Control** ⑰ △4 to select the next output-channel location that you wish to adjust. To adjust the subwoofer level, press the ▲/▼ **Navigation Control** ⑰ △4 until SP LEVEL SUB 0 appears in the **Lower Display Line** 🅴.

Repeat the procedure as needed until all channels requiring adjustment have been set. When all adjustments have been made and no further adjustments are made for 5 seconds, the CVR700 will return to normal operation.

The channel output for any input may also be adjusted using the on-screen menu system. First, set the volume to a comfortable listening level using the **Volume Control** 20 ㉑ △12 . Then, press the **OSD Button** ⑭ △36 to bring up the MASTER MENU (Fig. 1). Use the ▲/▼ **Navigation Controls** ⑰ △4 to scroll down to the SPEAKERS line, and press the **Set Button** ⑲ △7 to select it. The confirmation menu (Figure 18) will appear, and you should scroll down to the YES line and select it. This will cause the SPEAKERS menu (Figure 19) to be displayed. Scroll down to the LEVELS line and select it, which will bring up the SPEAKER LEVELS submenu (Figure 27).

Once the SPEAKER LEVELS submenu appears on your video screen, use the ▲/▼ **Navigation Controls** ⑰ △4 to move the on-screen ▶ cursor so that it is next to the TEST TONE line. Press the ◀/▶ **Navigation Controls** ⑰ △6 so that OFF is highlighted. This will turn off the test tone and allow you to use your external test disc or other source material as the reference. Then, use the ▲/▼ **Navigation Controls** ⑰ △4 to select the channels to be adjusted. At each channel position, use the ◀/▶ **Navigation Controls** ⑰ △6 to change the output level. Remember, the goal is to have the output level at each channel be equal when heard at the listening position.

If you wish to reset all the levels to their original factory default of 0dB offset, press the ▲/▼ **Navigation Controls** ⑰ △4 so that the on-screen cursor is next to the RESET line and press the **Set Button** ⑲ △7. After the levels are reset, resume the procedure outlined above to reset the levels to the desired settings. When all adjustments are done, scroll BACK TO MASTER MENU and then press the **Set Button** ⑲ △7 if you wish to go back to the main menu to make other adjustments. If you have no other adjustments to make, press the **OSD Button** ⑭ △36 to exit the menu system.

NOTE: Output levels may be separately trimmed for each surround mode. If you wish to have different trim levels for a specific mode, select that mode and then follow the instructions shown above.

Memory Backup

This product is equipped with a memory backup system that preserves the system configuration information and tuner presets if the unit is accidentally unplugged or subjected to a power outage. This memory will last virtually indefinitely.

OPTICAL DISC CHANGER PLAYBACK BASICS

Loading Discs

To load discs in the CVR700, first turn the CVR700 on by pressing the **Main Power On/Off Switch** 1.

Set the CVR700 to the DVD source input either by slowly rotating the **Source Selector** 17 until it engages in the notch and `DVD` appears in the **Information Display** 21, or by pressing the **DVD Input Selector** ④ ▲2 .

Press the **Eject Button** 6, and you will be prompted to select a disc number by a message in the **Lower Display Line** E. You must enter a number, either by pressing one of the front-panel **Disc Selectors** 5, or by entering a number between 1 and 5 using the **Numeric Keys** ㊽ ▲14 . If you don't enter a number, the CVR700 will cancel the command. The **Disc Indicator** D corresponding to the tray number you selected will flash. The door will drop forward and the magazine tray corresponding to the disc position you have selected will slide forward. Note that the door will open only enough to allow the correct tray to slide forward, so that the door opens wider for the higher numbered trays located further down. This is perfectly normal.

Hold the disc by the edge, and gently place it into the disc drawer, making sure the disc is properly seated in the tray's insert. If the disc is not correctly centered, you may damage both the disc and the player when the drawer closes. When loading discs, please note the following:

- The CVR700 will play discs with the following logos, as well as most WMA and JPEG discs. It will play Kodak Picture CDs, but not Photo CDs. DO NOT attempt to play another type of disc.

DVD AUDIO
DVD AUDIO
DVD VIDEO
DVD VIDEO
COMPACT disc DIGITAL AUDIO
COMPACT disc DIGITAL VIDEO
COMPACT disc DIGITAL AUDIO Recordable
COMPACT disc DIGITAL AUDIO ReWritable
MP3
Kodak PICTURE CD COMPATIBLE

- The CVR700 will play discs in the NTSC and PAL video formats.
- Playback capability for CD-RW, DVD-RW or DVD+RW discs will vary according to the quality of the disc. On some occasions, it is possible that these discs may not play on the CVR700. This does not indicate any problem with the CVR700.
- The CVR700 will only play discs that are coded for Region 1 or discs that are open to being played in all regions. Discs that contain any other Region Code will not play.
- Both 5-inch (12cm) and 3-inch (8cm) discs may be used.
- When loading CD audio discs, load the discs with the label side up.
- When loading DVD discs with printed labels, load them label side up.
- Some DVD discs are double-sided. The title information for these will be printed on the inner ring of the disc, very close to the center hole. The title for the side you wish to play should be facing up.

Once a disc is properly loaded, press the **Eject Button** 6 to close the disc drawer. After the drawer closes, you will need to instruct the CVR700 to play the disc by pressing the **Play Button** 11㊶ ▲25 . The **Lower Display Line** E will prompt you for a disc number. You may enter the number of any loaded disc either by pressing its corresponding **Disc Selector** 5 or by using the **Numeric Keys** ㊽ ▲14 . If you don't select a disc, the CVR700 will load the last disc played.

However, if no other discs are loaded and you press the **Play Button** 11㊶ ▲25 instead of the **Eject Button** 6 to close the disc drawer, the CVR700 will close the door and begin play of the disc you just loaded.

You will briefly see `LOADING` in the **Information Display** 21 to alert you to the fact that the unit is determining the type of disc (DVD, DVD-Audio, CD, VCD, JPEG, WMA or MP3) and is reading the data for track, chapter, title and other information about the disc.

Status Bar

Once the disc's data has been read, the type of disc will be displayed by the **Disc-Type Indicator** A and the disc will begin playing. The disc's track timing information and other relevant data will appear in the **Upper Display Line** H.

While a disc is playing, you may access the Status Bar by pressing the **Status Button** ㉙ ▲26 to view information on the current title and chapter, to change the current title or chapter, or to view time elapsed or remaining for a title or chapter (see Figure 41).

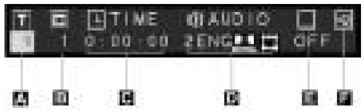


Figure 41

A Title Number: The first item in the Status Bar is the current Title Number. When this number is highlighted, you may use the **Numeric Keys** ㊽ ▲14 to enter the number of the desired title, and press the **Set Button** ⑲ ▲7 to switch to that title. Some discs may prohibit this action during certain titles, such as the warnings against copying the disc. Note that when the DVD Audio setting in the `DVD SETUP` menu (Figure 31) has been set to `ON`, this item will be the Group number. When the DVD Audio setting has been set to `OFF`, the disc will be recognized as a DVD-Video disc, and this item will be the title number.

B Chapter Number: The second item is the current Chapter Number. When this number is highlighted, you may use the **Numeric Keys** ㊽ ▲14 to enter the number of the desired chapter, and press the **Set Button** ⑲ ▲7 to switch to that chapter. Some discs may prohibit this action during certain titles, such as the warnings against copying the disc. Note that when the DVD Audio setting in the `DVD SETUP` menu (Figure 31) has been set to `ON`, this item will be the Track number. When the DVD Audio setting has been set to `OFF`, the disc will be recognized as a DVD-Video disc, and this item will be the chapter number.

C Elapsed Time: The third item is the Elapsed Time of the current chapter. It is not possible to display other time variables. When this item is highlighted, you may take advantage of the Time Search feature, which allows you to begin playback from a specified point on the disc. Use the **Numeric Keys** ㊽ ▲14 to enter the hour/minute/second indication of the time at which you wish play to begin, followed by the **Set Button** ⑲ ▲7 . Playback from that point will begin immediately. (See Figure 42).

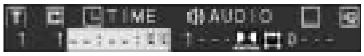


Figure 42

D Audio: The fourth item is the Audio track currently in use. The audio track is denoted by a number preceding it to indicate its order of availability. Next, the language is displayed, such as ENG for English or SPA for Spanish. Following this is the bitstream type, which may be PCM for a two-channel format; or DTS or the Dolby logo for one of those formats. Next to the format is an icon that reflects the number and location of the channels in the bitstream. The icon is in the shape of a square that represents a listening room, with the front channels at the top. A small block will appear at the location of each channel encoded in the bitstream, with only one block at each top corner for a 2-channel format. Figure 41 depicts that a Dolby Digital 5.1-channel bitstream has been detected. Note that while the disc is playing, a 0 or 1 may also appear to the right of the icon to indicate whether an LFE channel is present (0 if no LFE channel is present or "1" if the LFE channel is detected). If the disc has more than one audio track; such as 2.0-channel PCM, 5.1-channel Dolby Digital or a director's commentary; you may cycle through these tracks while the disc is playing by repeatedly pressing the **Audio Button** ㉛ ▲7 .

E **Subtitle:** The fifth item is the current Subtitle status. If the disc contains subtitles, you may cycle through the available languages while the disc is playing by repeatedly pressing the **Subtitle Button** ㉜ ▲7 . In addition to displaying the available languages, the Subtitle feature may be set to Off by continuing to press the button.

F **Angle:** The sixth item is the current camera angle. This feature is only available on certain DVD discs; check the DVD jacket to determine whether this feature is available on the disc. You may change the angle setting at any time by repeatedly pressing the **Angle Button** ⑮ ▲15 . However, the on-screen view will only change during portions of the disc where the multi-angle feature has been activated. At the beginning of a passage where multiple camera angles are available, a Status Banner will appear indicating "Angle Area In". At any time after this message appears, press the **Angle Button** ⑮ ▲15 to view the program using a different camera angle. Another Status Banner with the message "Angle Area Out" will appear at the end of the passage. After this second banner appears, pressing the **Angle Button** ⑮ ▲15 will change the setting, but the on-screen image will not change.

NOTES:

- The full Status Bar is only available while a disc is playing. If you press the Status Bar in Stop mode, an abbreviated Status Bar will appear (see Figure 43) that only indicates the current title, and does not permit you to change the title number.

Figure 43

- If you press the **Audio Button** ㉛ ▲7 , the **Subtitle Button** ㉜ ▲7 or the **Angle Button** ⑮ ▲15 without the Status Bar being on screen, the segment of the Status Bar relating to the function you selected will appear on screen by itself, and you will be able to change the setting for that function by continuing to press the corresponding button. (See examples of the Subtitle segment in Figures 44 and 45.)

Figure 44

Figure 45

A different Status Bar is displayed on screen when a CD is playing (see Fig. 46). This Status Bar only contains two items: the current Track number followed by the total number of tracks on the disc and the elapsed time. When the Track number is highlighted, you may use the **Numeric Keys** ㊽ ▲14 to enter the number of a track you wish to skip to. The Time Search function is also available for CDs. Use the **Numeric Keys** ㊽ ▲14 to enter the hour/minute/second indication of the time at which you wish play to begin, followed by the **Set Button** ⑲ ▲7 . Playback from that point will begin immediately.

Figure 46

Status banners may also appear on screen briefly to display messages such as "Disc Loading", "Play", "Stop", "Pause", "Feature Not Available" or other status messages. These messages are generated by the DVD changer section of the CVR700, and are separate from banner messages generated by the CVPD50 screen.

Selecting a Disc For Playback

There are several methods for playing a loaded disc in the CVR700:

- Turn on the CVR700 by pressing the **Main Power On/Off Button** **1**.
- Any discs already loaded in the changer will be indicated by the **Disc Indicators** **D**. The indicator for the last disc played will be flashing. Note that the **Upper Display Line** **H** will indicate that the unit is in Stop mode, even when no discs are loaded. Check for lit **Disc Indicators** **D** to determine whether any discs are available for play. Play will not begin automatically. If you press the **Play Button** **11** ㊶ ▲25 ; you will be prompted on the **Lower Display Line** **E** to enter the number of the disc you wish to play. If you enter a disc number using the **Numeric Keys** ㊽ ▲14 or the **Disc Selectors** **S**, the CVR700 will play that disc. If you do nothing, the CVR700 will play the last selected disc, whose **Disc Indicator** **D** will be flashing.
- If you wish to play a different disc, you may skip to the next numbered disc by pressing the **Disc Skip Button** ㉚ ▲31 . If you wish to skip to a different disc, press the **Disc Direct Button** ㊲ ▲13 , and then enter the desired disc number using the **Numeric Keys** ㊽ ▲14 . If there is no disc in that location, the CVR700 will do nothing.

JBL On Screen Library

With five disc positions available, it is easy to forget the location of a desired disc. Rather than having to scan through all five positions, the CVR700 offers the

JBL On Screen Library, which conveniently displays the loaded discs without your having to look at each disc individually. When play is stopped, you may use the JBL On Screen Library feature. Press the **OSL Button** ㊵ ▲37, and the CVR700 will read and identify all loaded discs, a process which may take several minutes, but which only needs to be performed once. A thumbnail for each disc position will appear on screen, including a thumbnail image representative of the disc materials, if one exists on the disc, or a logo indicating the disc type; the disc's title, if it is on the disc; and the disc type (see Figure 47). Both MP3 and WMA discs will cause an icon called COMPRESSED to appear. When the disc is selected, its compressed-audio type will be displayed in the usual on-screen information display for the disc contents. Use the ▲/▼/◀/▶ **Navigation Controls** ⑰ ▲4 ▲6 to highlight the desired disc, and press the **Set Button** ⑲ ▲7 to select it for immediate playback. Select the Exit Library icon if you wish to leave the library display without selecting a disc.

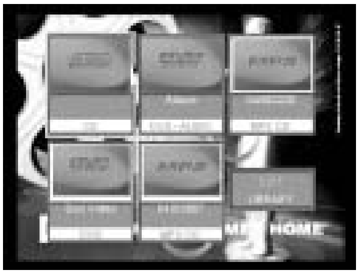


Figure 47

Transport Controls – Playing a Disc

Basic playback using the CVR700 involves functions similar to those you may be familiar with for conventional CD players or changers:

- Press the **Play Button** 11 ㊶ ▲25. You will be prompted to select a disc number; use the **Disc Selectors** 5 or the **Numeric Keys** ㊽ ▲14.
- To momentarily pause playback (and freeze the current picture frame on a DVD), press the **Pause Button** 12 ㉓ ▲23. To resume playback, press the **Play Button** 11 ㊶ ▲25.
- The CVR700 also provides a Resume mode that pauses playback, but does not freeze a DVD's current picture frame. Resume mode is not available for CDs or VCDs. To enter Resume mode for any other disc type, press the **Stop Button** 13 ㉓ ▲24 once. If you press the **Play Button** 11 ㊶ ▲25, the disc will resume playing from the point at which it was stopped. Resume mode is not preserved if you turn off the CVR700, change to another disc, or select another source.
- Press the **Stop Button** 13 ㉓ ▲24 twice (once for CDs and VCDs) to stop playback and enter Stop mode. If you press the **Play Button** 11 ㊶ ▲25 with the disc in Stop mode, play will begin from the beginning of the disc, and you will also be prompted to select another disc by entering its number.
- To move forward or backward through the tracks on a CD, VCD or DVD-Audio disc, or through the chapters on a DVD-Video disc, or through the still images on a JPEG disc, press the **Track Skip Forward/Reverse Buttons** 8 ⑳ ㊹ ▲30. This will not work on MP3 and WMA discs, which are navigated using a special screen described on page 72.
- To scan quickly forward or backward within a track or chapter on a CD, DVD, VCD, WMA or MP3 disc, press the **Forward/Reverse Search Buttons** ⑳ ㊹ ▲30. Each press will increase the scan speed by one step, cycling through the available scan speeds for each disc type (see below). If you press the opposite-direction search button while in Search mode, the CVR700 will begin to scan in the opposite direction. Press the **Play Button** 11 ㊶ ▲25 to stop scanning.

For DVD-Audio and DVD-Video playback, there are four forward and reverse search speeds. Each press of the **Forward/Reverse Search Buttons** 8 ㉒ ㊷ ▲27 ▲29 will cycle to the next speed in the following order: 2x, 16x, 64x, 200x.

For CD and VCD playback, there are three forward and reverse search speeds: 2x, 4x, 8x.

For MP3 and WMA compressed-audio-file playback, there are four forward and reverse search speeds: 2x, 4x, 8x, 16x.

- For DVD-Video discs only, you may play the program material in forward or reverse slow motion. Press the **Slow Play Forward/Reverse Controls** ㊸ ▲32 to cycle through the three available speeds: 1/2x, 1/4x, 1/8x.

NOTE: There will be no audio playback during forward or reverse fast- or slow-play of DVDs, as it isn't possible to decode and process the digital audio streams during these modes. However, audio will be heard during fast-play of audio CDs (slow-play is not available for CDs).

- The front-panel **Skip/Search Buttons** 8 function slightly differently than the remote buttons. When the disc changer is the source, press and release these buttons to move (skip) either backward (left button) or forward (right button) through the tracks on a DVD-Audio, CD or VCD disc or the chapters on a DVD-Video disc. Press and hold either button for at least 1 second to search either backward (left button) or forward (right button) the current track or chapter at 2x speed. Press and hold again and release to increase the scan speed to 4x. Repeat this procedure while in scan mode to cycle through these scan speeds: 2x, 4x, 16x, 100x, 2x and so forth. Press and release the button while scanning to skip tracks or chapters. To stop searching, you must press the **Play Button** 11, the **Stop Button** 13 or the other **Search Button** 8.
- To advance frame by frame while a DVD-Video disc is playing, press the **Pause Button** 12 ㉓ ▲23 once, and then each subsequent press of the **Pause Button** 12 ㉓ ▲23 will step one frame forward through the program. Reverse step is not available. Press the **Play Button** 11 ㊶ ▲25 to resume normal play.
- While a disc is stopped, a Stop icon (■) will appear on the left side of the **Upper Display Line** H. During playback, a Play icon (▶) will appear, and when the disc is paused, a Pause icon (❙❙) will appear. During Search modes, the Play icon will remain in the display, and the **Lower Display Line** E will indicate that the disc is being scanned either forward or in reverse.
- During normal play, the **Upper Display Line** H will indicate the track number and elapsed time for CDs; the group and track numbers and elapsed time of the track for DVD-Audio discs; the title and chapter numbers and elapsed time of the chapter for DVD-Video discs; and the WMA, MP3 or JPG file number (and elapsed time for audio files).

Random Play

The CVR700 allows you to randomly play the tracks on an audio CD or a VCD, or MP3 or WMA compressed audio files. Random playback is not available for

DVD-Audio, DVD-Video or JPEG discs. When available, Simply press the **Random Button** ㉖ to enter Random mode (a banner will appear on screen), and again to exit Random mode.

Audio CDs: You may enter or exit Random mode either while the disc is playing, or after play has been stopped by pressing the **Stop Button** 13 ㉓ ▲24 twice.

VCDs: Random mode is only available in Stop mode, after play has been stopped by pressing the **Stop Button** 13 ㉓ ▲24 twice.

MP3 and WMA discs: You may enter or exit Random mode either while the disc is playing, or after play has been stopped by pressing the **Stop Button** 13 ㉓ ▲24 twice.

The **Random Indicator** C will light when the CVR700 is in Random mode.

Repeat Play

The CVR700 offers several repeat options that allow for unattended playback, even on a continuous basis. There are two basic types of Repeat modes: conventional Repeat, which allows you to repeat discs and their existing subdivisions; and Repeat A-B, in which a passage you select is repeated. The available Repeat modes will vary depending on the type of disc.

The conventional Repeat modes are accessed by repeatedly pressing the **Repeat Button** ㉗ to cycle through the available modes or exit Repeat mode.

DVDs: The conventional Repeat modes are only available while the disc is playing. Each press of the **Repeat Button** ㉗ will cycle through the Chapter Repeat On, Title Repeat On and Repeat Off modes.

Audio CDs: The available conventional Repeat modes vary depending on whether the disc is in Play mode or Stop mode.

While a disc is playing, each press of the **Repeat Button** ㉗ will cycle through the Repeat One Track, Repeat All Tracks, Repeat All Discs and Repeat Off settings, as displayed on screen in a banner and on the front panel. The selected Track or disc will be repeatedly played until play is stopped, or the Repeat mode is exited. In Repeat All Discs mode, if the CVR700 detects a DVD in a succeeding tray, it will play it, but it will automatically end Repeat mode.

In Stop mode, only the Repeat All Tracks and Repeat All Discs modes are available.

VCDs: The conventional Repeat modes are only available in Stop mode. As with audio CDs, only the Repeat All Tracks and Repeat All Discs modes are available.

MP3 and WMA discs: The conventional Repeat modes are available in both Play and Stop modes. Unlike other disc types, the folders and files on a compressed-audio disc are displayed on screen and may be navigated (see page 72). Thus, it is possible to program Repeat One File mode while the disc is stopped. The other available repeat modes are Repeat All Files (in a folder), Repeat Disc and Repeat Off.

The **Repeat Indicators** C will light to indicate the current Repeat mode.

Repeat A-B

The Repeat A-B function allows you to select any portion of a disc (except for VCD, MP3 and WMA discs) and have it repeat until play is stopped.

While the disc is playing, when the beginning of the desired passage is reached, press the **Repeat A-B Button** ㉘ once. A banner with the message "A to B Repeat Set A" will appear on screen momentarily. When the end of the desired passage is reached, press the **Repeat A-B Button** ㉘ once more. The message "A to B Repeat On" will appear briefly. The passage will continue to play repeatedly until you manually stop play, or press the **Repeat A-B Button** ㉘ once again so that the message "A to B Repeat Off" is displayed on screen.

NOTE: The A-B Repeat range may cover several titles or chapters on a DVD, as long as the DVD disc's control program does not force the CVR700 to return to a DVD menu in between.

Using a DVD's Menu

One of the unique features of the DVD system is that it offers a producer the opportunity to include a wide range of features on a disc, including multiple-language tracks; subtitles in a variety of languages; special information such as movie trailers and cast information; as well as other customized information. In addition, producers may divide a movie or program into chapters that allow for quick access to specific parts of the program. These chapters may be accompanied by thumbnail pictures of a scene from the specific chapter to help you select the desired spot on the disc.

When a disc is playing, press the **Disc Menu Button** ㊻ ▲38 to pause the playback and display the disc's menu. As there are no hard rules about style and content for DVD menus, the way they appear on the screen and the information they contain will vary from one disc to another. However, the following general rules apply to most menus:

- The first menu that appears is the Main Menu, and you may move through the options with the **Navigation ▲▼◀▶ Buttons** ⑰ ▲4 ▲6 , as the disc's programming allows. The option selected will typically be highlighted in a certain color or inside an outline box.
- To select a highlighted option, which may either play a portion of the disc or move to a submenu, press the **Set Button** ⑲ ▲7 or **Play Button** 11 ㊶ ▲26 .
- On some discs, when you select the DVD menu during the playback of a movie, the disc will return to the point in the program where the menu was selected by offering a "Play Movie" option. Press the **Set Button** ⑲ ▲7 or **Play Button** 11 ㊶ ▲26 to resume play. However, not all discs offer this feature, and selecting the menu while playing a movie may mean that you will either have to go back to the beginning of the program or the start of a chapter. This feature is out of the control of the CVR700, as it is set by the disc's internal programming.

Important Notes on DVD Playback

The sensitive CVPD50 plasma display screen is vulnerable to "burn-in" if any still image remains on screen for any length of time. It doesn't take very long for an image to burn in, and it is important to avoid leaving certain displays on screen for more than a few minutes, as "burn-in" cannot be repaired, and will not be covered by your warranty. Therefore, DO NOT leave DVD menu screens on display for more than a brief period of time unless they contain movement. Either begin play of the movie, or turn off the system (especially the screen) after 5 minutes.

The CVR700 is capable of all the features and options covered by the DVD standards. However, it is up to the producer of a DVD disc to decide which of those features and functions are available on any given disc. For that reason, not all discs will function identically, and some discs will not have many of the features of the DVD system. For example, most current DVD discs do not take advantage of the multiple-angle feature. When you press a button and the player displays the "Feature Not Available" message, this is an indication that the disc has not been programmed for that feature, or that the CVR700 is not capable of executing that command on that disc in the current mode.

In addition, it is common for the producers of DVD discs to block the use of certain functions during only some parts of a disc. For example, many discs prohibit the use of fast-play buttons or prohibit access to the Chapter Menu display during the playback of copyright notices, studio logos, movie credits or trailers. The appearance of the "Feature Not Available" message, or the inability of certain features to operate when the disc itself has prohibited them, does not indicate a problem with the CVR700, as these features are outside of the unit's control.

- Some DTS discs contain incorrect digital flags that may initially cause the CVR700 to display incorrect information on the available surround modes or other features. This is the fault of the disc author and not the CVR700, which will correctly process the disc's bitstream once it has been detected and identified.

NOTES ON DVD-AUDIO DISCS:

- Some DVD-Audio discs contain two menus, one used when the disc is played on a DVD-Audio player, and a DVD-Video menu used on older players that do not recognize the DVD-Audio format. You may view the DVD-Video menu by turning off the CVR700's DVD-Audio capability temporarily, using the DVD Setup menu (see Figure 31). You may wish to do this in order to access certain audio surround tracks, such as Dolby Digital 5.1 or PCM on the disc. When you have finished exploring the DVD-Video capabilities of the disc, remember to restore the CVR700's DVD-Audio capability.
- Some DVD-Audio discs do not permit you to access the disc menu using the **Menu Button** ㊻ ▲38 . However, pressing the **Title Button** ㉕ or the **Audio Button** ㉛ may provide menu access. In addition, you may simply place the disc in Stop mode and play the tracks in order.

Zoom Feature

The CVR700's advanced digital video processing circuits include a Zoom feature that allows you to enlarge the image for closer examination of a particular part of the picture. Four steps of enlargement are available.

- To use the Zoom feature, press the **Zoom Button** ㊼ ▲28 while a disc is playing or paused. Each press of the button will increase the zoom-in effect. When you have zoomed through all four steps, the picture will return to normal size.
- When in any of the Zoom modes, you may use the **Navigation ▲▼◀▶ Buttons** ⑰ ▲4 ▲6 to navigate around the frame.
- Some discs are created in a way that prevents the Zoom feature from operating. In addition, the Zoom feature will not operate on disc menus and may not operate on subtitles.
- The Zoom function is not available for VCD or JPEG discs.

Audio CD Playback Features

When playing audio CDs, your DVD player has the same features as a CD player, including track skip, repeat play and programmed playback, as described on pages 68–69. You may also access these functions directly using the remote control.

Selecting a Track

During Stop, Resume or Play mode, enter the track number directly with the **Numeric Keys** ㊽ ▲17 on the remote. The track selected will be played at once.

You can skip through tracks forward or backward by pressing the **Forward/ Reverse Skip Buttons** 8 ⑳ ㊹ ▲30 .

In Stop mode, the **Upper Display Line** H will show the number of tracks recorded on a CD and the total time on the disc.

During normal play the **Upper Display Line** H will indicate the track number and elapsed time. The **Lower Display Line** E will indicate the currently selected audio surround mode.

CD Status Bar

While a CD is loaded, you may view its Status Bar by pressing the **Status Button** ㉔ ▲26 . If the CD is in Stop mode, the Status Bar will display the total number of tracks on the disc, and the total time of the disc. If the CD is playing, the first item shown will be the current track number, followed by a slash, and then the total number of tracks on the disc. The second item shown will be the elapsed track time (see Figure 46).

To skip directly to a specific track, make sure the remote control is in DVD mode by pressing the **DVD Input Selector** ❹ ▲2 , then enter the number of the track you wish to play using the **Numeric Keys** ㊽ ▲17 . If the Status Bar is on screen, you must press the **Set Button** ⑲ ▲7 after the track number to enter it. If the Status Bar is not on screen, the CD will immediately skip to the track you entered.

The Time Search function enables you to begin play at a specific time point on the disc. Press the **Status Button** ㉔ ▲26 to display the Status Bar. Use the ◀/▶ **Navigation Controls** ⑰ ▲6 to highlight the elapsed track time, then simply enter the time from which you wish play to begin using the **Numeric Keys** ㊽ ▲17 , and then press the **Set Button** ⑲ ▲7 to enter it. Play will begin immediately from that point in the current track.

Video Off Feature

During CD playback, the JBL logo screen will remain on display. After a few minutes, the screen saver image should begin automatically, as a moving image is necessary to avoid "burn-in" of an image on the sensitive CVPD50 plasma display. Some users may wish to turn the video display off if they find the visual display distracting or unnecessary during audio playback.

The CVPD50 screen may be placed in Screen Standby mode by first making sure the remote control is in Screen mode by pressing the **Screen Selector** ❺ ▲34 . Then press the **Screen Standby Button** ㉟ ▲19 to place the screen in Standby mode. Press it again to return the screen to normal viewing mode. The front-panel displays on the CVR700 will remain lit to remind you that the system is on.

MP3/WMA PLAYBACK

The CVR700 is among those DVD players that are able to play back discs recorded with MP3 or WMA files. This means that you may enjoy the latest music using discs created in your computer through the high-quality audio components in your home theater system. As the way that MP3 and WMA files are recorded on discs differs from the way conventional CD audio discs are structured, MP3/WMA playback is slightly different from that of standard CDs.

Important Note on MP3 Playback: MP3 and WMA discs may contain 200 tracks or even more. To get the best overview about all tracks on the disc and their names and to select or program them comfortably, use the on-screen display rather than the front-panel display. The front-panel display will only show the number and the elapsed time of the track being played.

Important Note on WMA Playback: The supported bit-rate is between 32k bits and 192k bits.

MP3 or WMA Disc Playback

After the disc is loaded and the tray closed, the CVR700 will read the disc's table of contents (TOC). A listing of all the directories on the disc will be displayed if the disc was made with several directories (see Figure 48).

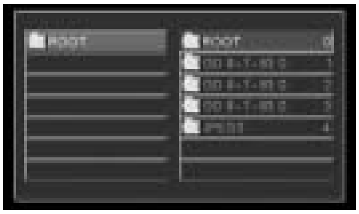


Figure 48

To select a directory (if any), press the ▲/▼ **Navigation Controls** ⑰ ▲4 ▲6 until the desired directory name is highlighted, then press the **Set Button** ⑲ ▲7.

The folder will expand, listing all of the tracks within the directory, each preceded by a logo to identify it as an MP3 file or WMA file. (See Figures 49 and 50.)

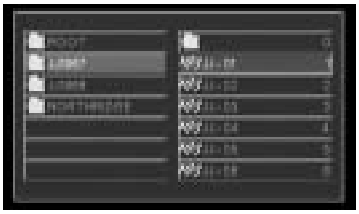


Figure 49

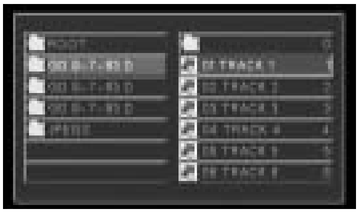


Figure 50

To select a track, press the ▲/▼ **Navigation Controls** ⑰ ▲4 until the desired track name is highlighted. If the list of tracks is longer than will fit on the screen, press the **Page Down/Up Buttons** ⑳㊹ ▲30 to jump through a list of the track numbers forward or backward through the list.

To start play of the track selected on the list, press the **Set Button** ⑲ ▲7 or **Play Button** [11]㊶ ▲25.

During MP3/WMA playback, some of the standard CD/DVD playback controls operate in their normal fashion:

- You may skip forward to the next track on the disc by pressing the **Skip Forward Button** [8]㊹ ▲30.
- You may skip back to the current or previous track on the disc by pressing the **Skip Reverse Button** [8]⑳ ▲30 once or twice.
- Press the **Pause Button** [12]㉓ ▲23 to momentarily stop playback. Press the **Play Button** [11]㊶ ▲25 to resume play. Press the **Stop Button** [13]㉓ ▲24 twice to enter stop mode.
- You may search through tracks forward or in reverse by pressing the appropriate **Search Buttons** ㉒㊷ ▲27 ▲29.
- You may play an MP3 or WMA disc in random mode like a normal CD (see page 68).
- The Repeat function may be accessed during playback of an MP3 or WMA disc.

NOTES ON MP3 AND WMA PLAYBACK

- During playback, the front-panel display and the time indicator on the screen above the list will show the elapsed time of the track being played. Other time display options are not available with MP3/WMA playback.
- The CVR700 is only compatible with standard MP3- and WMA-encoded discs. Other compressed audio formats used for Internet audio downloads will not play on the CVR700.
- Due to the differences in various versions of the MP3 and WMA formats, and the many differences between the CD-R machines used to record discs on a computer, it is possible that some discs may not play on the CVR700 even though they will work on a computer. This is normal and does not indicate a fault with the unit.
- When a multisession disc with both standard CD audio and MP3 or WMA content is in use, the CVR700 will play only the CD audio sections of the disc. Track numbers will be visible in the display, but the files will not be decoded.
- When a disc with multiple directories is playing, only tracks from one directory can be displayed and played at a time. Select the desired directory and press the **Play Button** [11]㊶ ▲25 to start the first track. To see and play tracks from other directories, first you must select that directory, then select the track and press the **Play Button** [11]㊶ ▲25.
- Only stereo audio playback is available for MP3 and WMA discs.

Programmed Playback With MP3 or WMA Discs

The CVR700 is capable of creating playlists of the files on a properly recorded disc. To create a playback list for MP3 or WMA titles, follow the same steps as for programming a playlist for any other format disc as described on page 75.

JPEG Playback

The CVR700 is one of the few available DVD players that is capable of recognizing JPEG still-image files and displaying them. When a disc containing JPEG files is loaded, the **CD ROM Disc-Type Indicator** A will light. The list of directories on the disc will appear, and may be navigated in the same way as for a compressed-audio disc. Use the ▲/▼ **Navigation Controls** ⑰ ▲4 ▲6 to select a folder, and press the **Set Button** ⑲ ▲7 to expand the folder and display the tracks. JPEG files are listed with an appropriate icon preceding the file name (see Figure 51). Press the **Play Button** 11 ㊶ ▲25 to begin displaying the images in the expanded folder. You may set the amount of time each image remains visible on screen using the DVD Setup menu (see Figure 31).

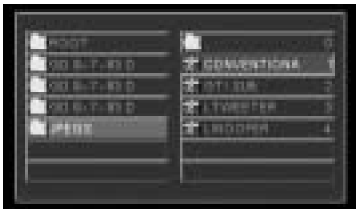


Figure 51

VCD PLAYBACK

VCD, a format that predates DVD, is based on a different compression format than DVD and a recording method that is similar to CD. Although the DVD has, for the most part, replaced VCD as a format, the CVR700 offers VCD playback so that you may play your existing library of VCD discs.

There are two versions of the VCD format: an early version which is simply called "VCD" and a later version with Playback Control which is called "Version 2.0" or "PBC." The CVR700 is compatible with both forms of VCD, although playback will vary according to which version is used and the specific way in which the disc was created.

Even though VCD discs provide video, because the format is based on CD technology, the playback functions for a VCD disc are similar to CD. To play a VCD disc, place it in the CVR700 as you would do with any other CD or DVD disc. The unit takes a few seconds to read the disc's contents. The **VCD Disc Type Indicator** A will light in the front panel. If the disc has playback control, a PBC ON banner will appear on screen briefly.

NOTE: Some VCDs are created without playback control, so that only a VCD file exists on the disc. The CVR700 may identify this disc with a **CDROM Disc Type Indicator** A, similar to a compressed audio disc. In that case, the disc is navigated the same way as an MP3 or WMA disc. A screen similar to the one in Figure 52 will appear, and you will need to select the VCD file and play it manually.

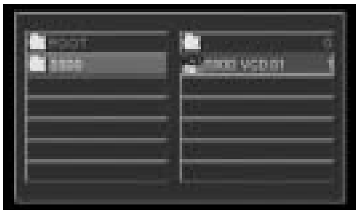


Figure 52

Keep in mind that the exact level of functionality for any VCD will vary widely and it is ultimately determined by the way the disc was created, not by the CVR700, particularly if the disc has been created under VCD Version 2.0 with Playback Control (see "Playback Control").

When playing VCD discs, most standard DVD/CD playback controls are used, including Play, Stop, Pause, Track Skip Forward and Reverse and Fast Forward or Reverse Search. The functions Slow Play and Step and the Zoom function are not available with VCDs.

You may select the track number and change it to skip to another track.

Using the Status Bar for VCD Playback

When playing VCD discs it is possible to view the Status Bar. Press the **Status Button** ㉔ ▲26 to see the Status Bar. Note, however, that when the PBC is on, some features may not be available with that VCD.

You will be able to see the current track number, followed by a slash and the total number of tracks on the disc. You will also be able to see the elapsed time for the current track. However, you may not be able to change the track number or utilize the Time Search function as with an audio CD.

Use of functions when the PBC is on will vary according to the disc type. Note that if the disc was created with Playback Control (PBC – see below), it is not possible to change track numbers directly.

Playback Control

VCD discs made under the Revision 2.0 specification will usually offer PBC playback control.

The PBC ON banner will appear when the disc is played.

With PBC, you can select titles and navigate the disc as with DVDs. However, the access to some functions may be prohibited by the PBC playback control; in that case, the FEATURE NOT AVAILABLE banner will appear on screen.

When the VCD is made without PBC, the disc can be controlled the same as an audio CD, but direct track access by entering a number is not possible without opening the Status Bar.

With PBC, many discs include chapter selection menus that are similar to those found on DVDs. However, on VCD discs the disc menu (if any) is accessed and controlled differently than on DVDs.

- Play will start with the first track (which may be an intro), then leading to the VCD menu (if any) automatically.
- NEXT (Skip Forward) will skip to the VCD menu from the intro (Track 1) directly.
- Once the menu options appear on the screen, make your selection by pressing the **Numeric Keys** ㊽ ▲14 that correspond to your desired choice. The desired selection will begin playing automatically.
- Direct number entry without any VCD menu shown on screen has no effect – even when the Status Banner is on.
- When PBC is on, the **Disc Menu Button** ㊻ ▲38 will have the same function as with DVDs, making the player return to the latest disc menu. When PBC is off, pressing the **Disc Menu Button** ㊻ ▲38 will turn the PBC on and the disc will be played from the beginning.

TROUBLESHOOTING GUIDE

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Unit does not turn on	• **Main Power Switch** turned off	• Press in **Main Power Switch** 1.
	• No AC power	• Check AC power plug and make certain any switched outlet is turned on.
	• Standby pressed within 4 seconds after Main Power Switch	• Press the Standby Switch at least 4 seconds after the unit has been turned on by the Main Power Switch 1.
Disc does not play	• Disc loaded improperly	• Load disc label-side up; align the disc with the guides and place it in its proper position.
	• Incorrect disc type	• Check to see that disc is CD, CD-R, CD-RW, VCD, SVCD, MP3, WMA, Photo CD, DVD-R, DVD-RW, DVD+R, DVD+RW (standard conforming), DVD-Video or DVD-Audio; other types will not play.
	• Invalid Region Code	• Make sure disc's Region Code matches code shown on rear panel of unit.
	• Rating is above parental preset	• Enter password to override or change rating settings (see page 54).
No picture	• Intermittent connections	• Check all video connections.
	• Wrong input	• Check input selection of TV or receiver.
	• Progressive Scan output selected	• Use Progressive Scan mode only with compatible TV.
	• Video Off feature active	• Press **Screen Standby Button** ㉟ ▲19 to reactivate video circuitry (see page 71).
	• Incompatibility between DVI (HDCP) source unit and CVR700	• Make sure to obtain the most recent software update for the source unit.
	• Port needs to be reset	• Sometimes it helps to simply turn off the CVR700 using the **Main Power On/Off Switch** 1, turn off the master power switch on the CVPD50 (depressed towards rear of unit), unplug the JBL Digital Link cable and unplug the AC power cords from both units. Then follow these steps in reverse order, and often the unit will function normally.
	• LED on CVPD50 flashing yellow and red	• Check AC power cord connections at wall and unit. Check CVPD50 power switch (should be depressed toward rear of unit). See note on page 45.
"Snowy" picture when used with external DVI (HDCP) DVD player	• Copy protection communication between the source unit and the CVR700 was unsuccessful	• Reset the connection by switching sources on the CVR700, or by stopping and restarting the DVD.
No sound	• Intermittent connections	• Check all audio connections.
	• Incorrect digital audio selection	• Check digital audio settings.
	• DVD disc is in fast or slow mode	• There is no audio playback on DVD discs during fast or slow modes.
	• Surround receiver not compatible with 96kHz PCM audio	• Use analog audio outputs.
Picture is distorted or jumps during fast forward or reverse play	• MPEG-2 decoding	• It is a normal artifact of DVD playback for pictures to jump or show some distortion during rapid play.
Some remote buttons do not operate during DVD play; prohibited symbol ⦸ appears (see below)	• Function not permitted at this time	• With most DVDs, some functions are not permitted at certain times (e.g., Track Skip) or at all (e.g., direct audio track selection).

SYMPTOM	POSSIBLE CAUSE	SOLUTION
The Feature Not Available message appears	• Requested function not available at this time	• Certain functions may be disabled by the DVD itself during passages of a disc.
Picture is displayed in the wrong aspect ratio	• Incorrect match of aspect ratio settings disc or video signal	• Change aspect ratio settings (see pages 13 and 27) using the **Frame Button** ㉗ ▲24 or **Letterbox Button** ㉖ ▲16 .
Remote control inoperative	• Weak batteries • Sensor is blocked	• Change both batteries. • Clear path to sensor or use optional outboard remote sensor.
Disc will not copy to VCR	• Copy protection	• Many DVDs are encoded to prevent copying to VCR.

System Reset

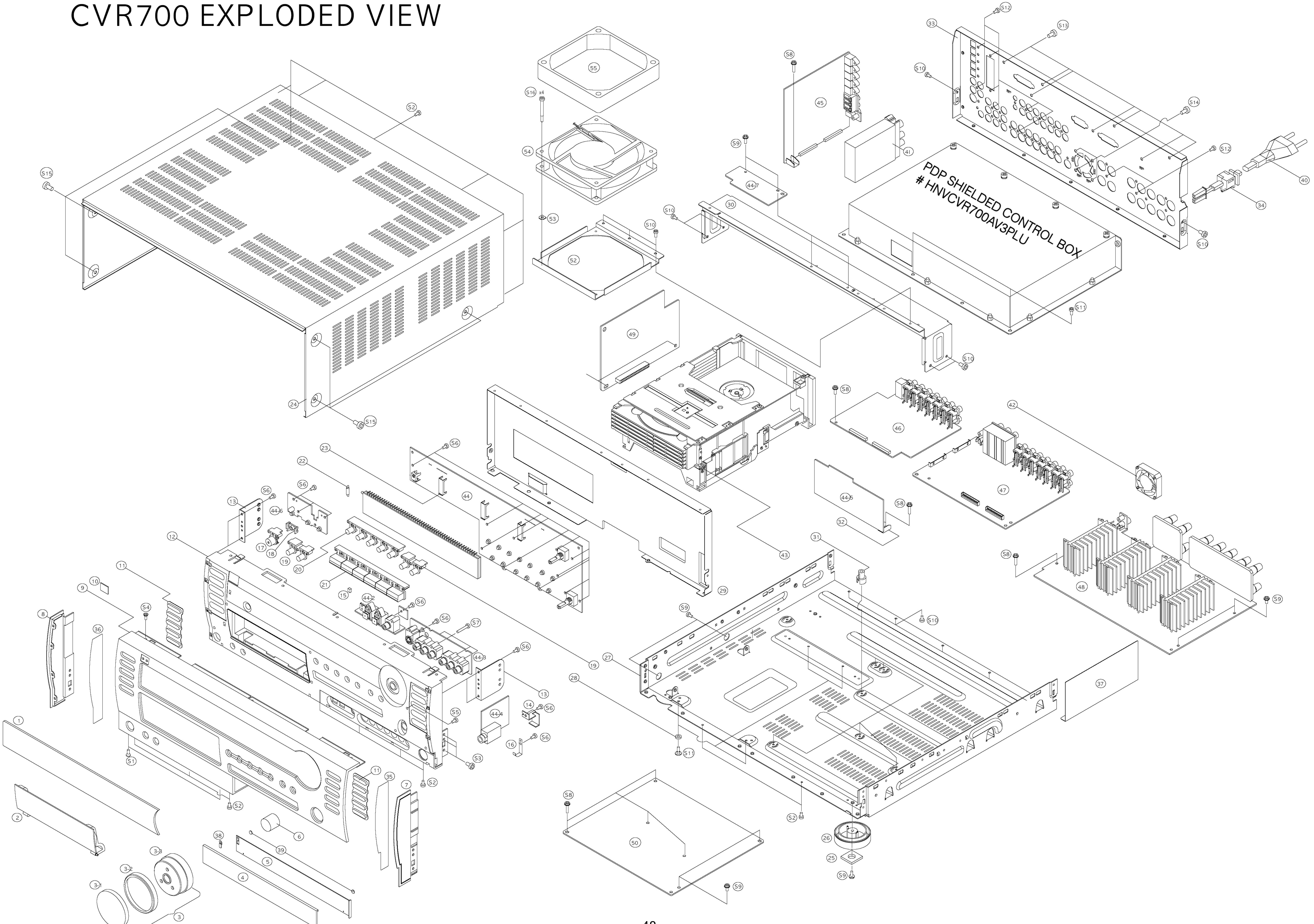
In the rare case in which the unit's operation or the displays seem abnormal, the cause may involve the erratic operation of the system's memory or microprocessor. To correct this problem, first try turning off the master power switch on the underside of the CVPD50 (depressed toward the front of the unit) and unplugging the JBL Digital Link cable, and the power cords for both the CVR700 and the CVPD50 and wait at least 3 minutes. After the pause, reconnect the AC power cords and the JBL Digital Link, turn the CVPD50's master power switch to the On position (depressed toward the rear of the unit) and check the system's operation. If the system still malfunctions, a system reset may clear the problem.

To clear the CVR700's entire system memory including tuner presets, output level settings, delay times and speaker configuration data, press the **Main Power On/Off Button** 1 to place both units in Standby mode, and then press and hold the **Mute Button** (53) ▲11 for 5 seconds. The unit's software version number will flash in the **Information Display** 21 as an indication that the unit has been successfully reset.

NOTE: Resetting the processor will erase any configuration settings you have made for speakers, output levels, surround modes and digital input assignments, as well as the tuner presets. The unit will be returned to the factory presets, and all settings for these items must be reentered.

If the system is still operating incorrectly, there may have been an electronic discharge or severe AC line interference that has corrupted the memory or microprocessor. If these steps do not solve the problem, consult your custom installer or an authorized JBL service center.

CVR700 EXPLODED VIEW



PDP SHIELDED CONTROL BOX
# HNVCVR700AV3PLU
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
S12
S13
S14
S15
S16 x4
1
2
3
3-1
3-2
3-3
4
5
6
7
8
9
10
11
12
13
14
15
16
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41
42
43
44
44-2
44-3
44-4
44-5
44-6
44-7
45
46
47
48
49
50
52
53
54
55

CVR700 EXPLODED VIEW PARTS LIST

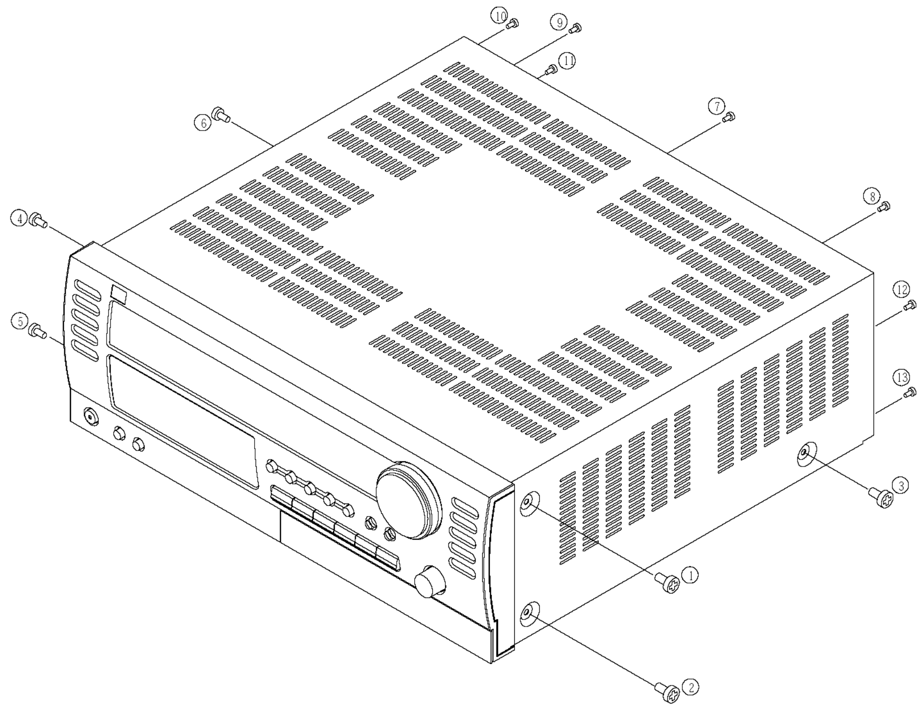
NO.	PARTS NO.	DESCRIPTION	Q'TY
S16	SCREW	CHD1A036FZ	4
S15	SCREW	CTB4+8FFC	4
S14	SCREW	CTB4+10JFZ	4
S13	SCREW	CTB4+6FFZ	7
S12	SCREW	CTB3+10GFZ	31
S11	SCREW	CHD1A051	4
S10	SCREW	CTB3+6J	11
S9	SCREW	CTW3+8J	10
S8	SCREW	CTW3+20J	6
S7	SCREW	CTB3+16GFZ	4
S6	SCREW	CTB3+10G	20
S5	SCREW	CTB3+8F	3
S4	SCREW	CTS3+10G	3
S3	SCREW	CTB3+8J	8
S2	SCREW	CTB3+8JFC	16
S1	SCREW	CTS3+10GFC	2

NO.	PARTS NO.	DESCRIPTION	Q'TY
56			
55	CHG1A311	RUBBER,FAN	1
54	HDME1225L12BFS	FAN,MOTOR	1
53	CHG1A219	RUBBER(A)	4
52	CMD1A553	BRACKET,FAN	1
50	COP11686BSMPS	SMPS PCB ASS'Y	1
49	CUP11685Z	DVD PCB ASS'Y	1
48		AMP PCB ASS'Y	1
47		VIDEO PCB ASS'Y	1
46	CUP11632Z	INPUT PCB ASS'Y	1
45		DIGITAL PCB ASS'Y	1
44-7	COP11680-7		1
44-6	COP11680-6		1
44-5	COP11680-5		1
44-4	COP11680-4		1
44-3	COP11680-3		1
44-2	COP11680-2		1
44-1	COP11680-1		1
44	CUP11680Y	FRONT PCB ASS'Y	1
43	CJDMGX-F8002	5CHANGER MECHANISM	1
42	HDMF410T12L1C01	FAN, MOTOR	1
41	CNVMV014MA080	AM,FM TUNER MODULE	1
40	CJA523FBYA	CORD,POWER	1
39	CHG1A296Y	CUSHION,DOOR	2
38	CMD1A529	BRACKET,LOCK	1
37	CMX1A198	INSULATOR	1
36	CHP1A060	ADHESIVE L	1
35	CHP1A059	ADHESIVE R	1
34	KHR1A028	BUSHING,AC CORD	1
33	CKF1A277Z	PANEL,REAR	1
32	CMD1A387	BRACKET,PCB	2

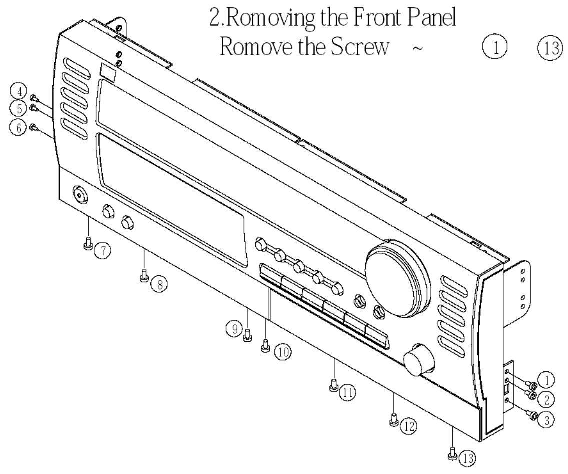
NO.	PARTS NO.	DESCRIPTION	Q'TY
31	CHE1A030	HOLDER,PCB	7
30	CMD1A521	FRAME,AV3	1
29	CMC1A221	PLATE,SHIELD	1
28	CHG1A283	RUBBER	4
27	CUA1A243	CHASSIS,BOTTOM	1
26	CKL2A069H43	FOOT	4
25	CHG1A050	CUSHION,FOOT	4
24	CKC2B153S46	CABINET,TOP	1
23	CMD1A209	BRACKET,FIP	3
22	CUS1A122	SPRING,DOOR	1
21	CBT1A929M7ZG5	KNOB,TUNING MODE	1
20	CBT1A928M7G5	KNOB,DISC SELECT	1
19	CBT1A926M7G5	KNOB,SLEEP	2
18	CGL1A141	INDICATOR,LINE	1
17	CBT1A925M7G5	KNOB,POWER	1
16	CUS1A137	SPRING,LOCK	1
15	KJC1A007	MAGNET	1
14	CMK1A010	BRACKET,PCB	1
13	CMD2A443	BRACKET,SIDE	2
12	CGW1A378R6ZG5	PANEL,SUB	1
11	CGG1A019K1	GRILL	2
10	KGB1A139Z	BADGE,JBL	1
9	CKM1A146ZC41	PANEL,AL	1
8	CGX1A350M7G5	COVER,L	1
7	CGX1A349M7G5	COVER,R	1
6	CBN1A183M7G5	KNOB,ROTARY	1
5	CGR1A335M7G5	DOOR,SUB	1
4	CGK1A099C41	DOOR,AL	1
3-3	CBN1A182M7G5	KNOB,VOLUME	1
3-2	CHG1A279	RUBBER,VOLUME	1
3-1	CGK1A100C41	CAP,VOLUME	1
3	CGK1A100ZA	VOLUME ASS'Y	
2	CGR1A334M7ZG5	DOOR,DVD	1
1	CGU1A339ZA22	WINDOW,FIP	1

1

1.Removing the Top Cabinet
Remove the Screw ~ ① ⑬

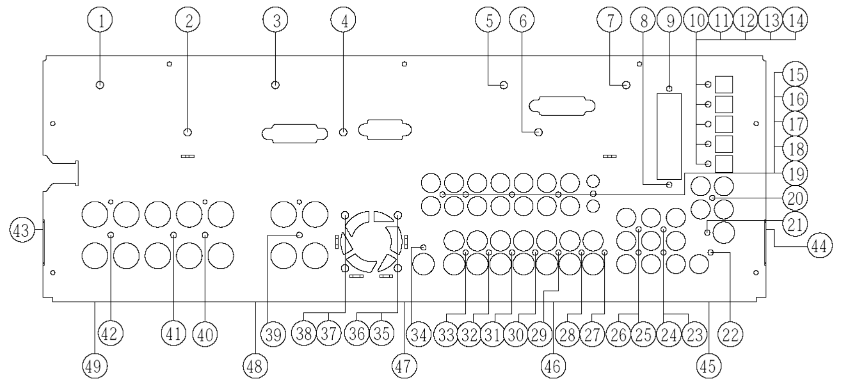

①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬

2.Romoving the Front Panel
Romove the Screw ~ ① ⑬

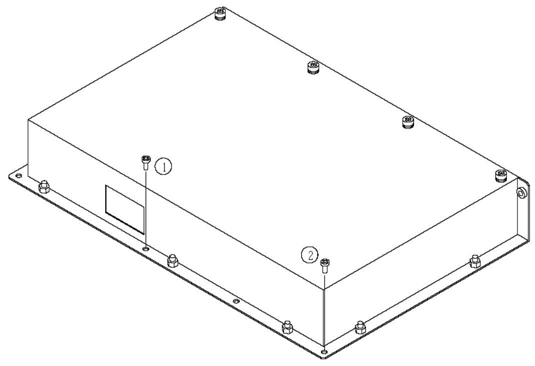

①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬

2

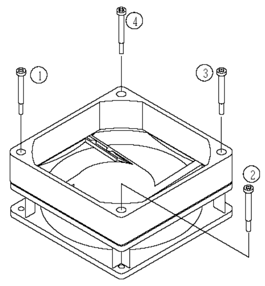
3.Removing the Rear Panel
Remove the Screw ~ ① (49)


① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭
⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒
㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ (49)

4.Removing the AV3 Plus Box
Remove the Screw ~ ① ②

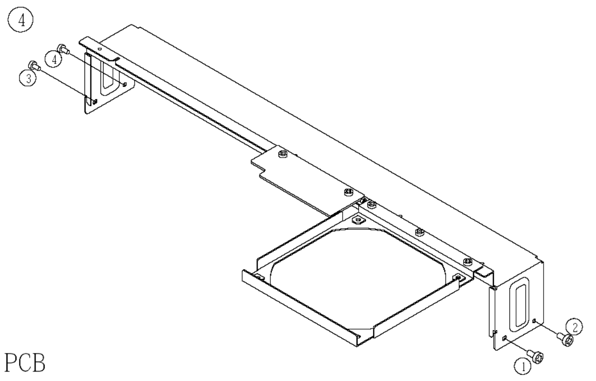


5.Removing the Fan Ass'y
Remove the Screw ~ ① ④

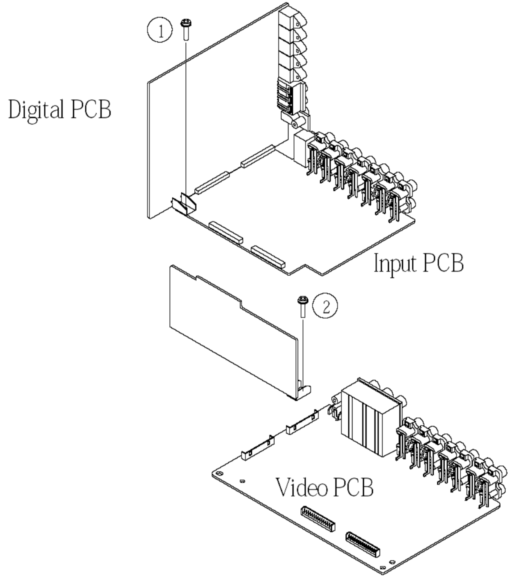


3

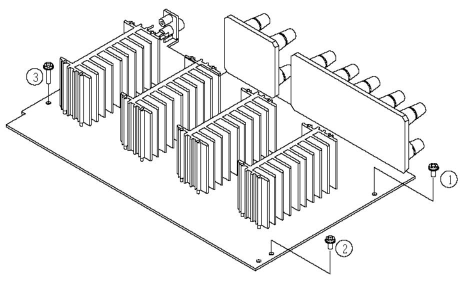
6.Removing the Frame Ass'y
Remove the Screw ~ ① ④



7.Remocing the Didital,Input, Video PCB
Remove the Screw ~ ① ②

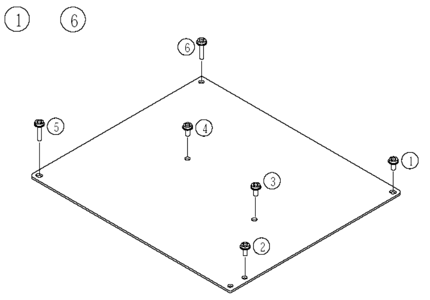

①
Digital PCB
Input PCB
②
Video PCB

8.Remocing the Amp PCB
Remove the Screw ~ ① ③

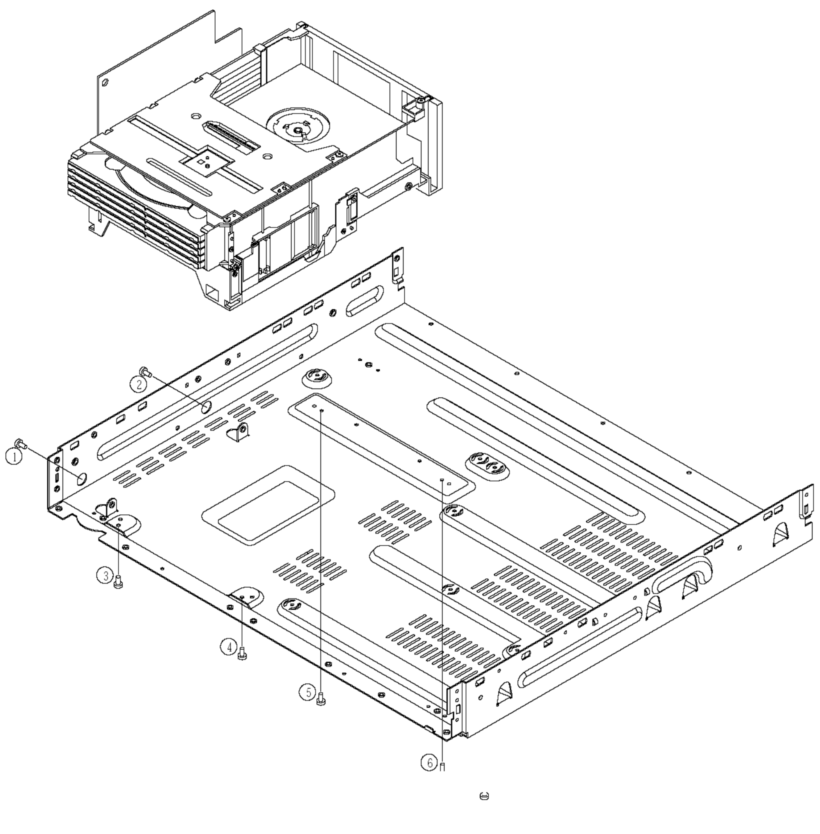


4

9.Remocing the SMPS PCB
Remove the Screw ~ ① ⑥



10.Remocing the 5 DVD Mechanism
Remove the Screw ~ ① ⑥



CVR700 DISASSEMBLY PROCEDURES

<1> Top Cover(24) REMOVAL

1. Remove 13 screws(S2,S15) and then remove the Top Cover.

<2> AV3+ BOX REMOVAL

1. Remove the Top Cover, referring to the previous step<1>.
2. Disconnect the FFC(12p) from connector(CN12) on the DVD PCB(49).
3. Disconnect the lead wire(7p) from connector(CN95) on the SMPS PCB(50).
4. Disconnect the lead wire(6p,for IIC) from connector(CN92) on the SMALL CONNECTION PCB(44-7).
5. Disconnect the lead wire(6p) from connector(CN95) on the DIGITAL PCB(45).
6. Disconnect the lead wire(8p) from connector(CN96) on the DIGITAL PCB(45).
7. Remove 9 screws(S11, S13) and then remove the AV3+ box.

<3> FRONT PANEL ASS'Y REMOVAL

1. Remove the Top Cover, referring to the previous step<1>.
2. Remove the Av3+ box, referring to the previous step<2>.
3. Disconnect the lead wire(BN91-6p) from connector(CN94) on the SMALL CONNECTION PCB(44-7).
4. Disconnect the lead wire(BN77-6p) from connector(CN77) on the SMALL CONNECTION PCB(44-7).
5. Disconnect the lead wire(BN78-6p) from connector(CN78) on the SMALL CONNECTION PCB(44-7).
6. Disconnect the lead wire(BN34-7p) from connector(CN34) on the DIGITAL PCB(45).
7. Disconnect the lead wire(BN13-8p) from connector(CN13) on the INPUT PCB(46).
8. Disconnect the lead wire(CN83-26p) from connector(CN22) on the INPUT PCB(46).
9. Remove 16 screws(S2, S3, S4) and then remove the Front panel Ass'y.

<4> REAR PANEL REMOVAL

1. Remove the Top Cover, referring to the previous step<1>.
2. Remove all screws on the rear panel.
3. Remove the rear panel.

<5> FRAME ASS'Y REMOVAL

1. Remove the Top Cover, referring to the previous step<1>.
2. Disconnect all lead wire from the SMALL CONNECTION PCB(44-7).
3. Remove 2 screws and then remove the SMALL CONNECTION PCB(44-7)
4. Remove 4 screws and then remove the FAN ASS'Y(52~55).
5. Remove 4 screws and the remove the FRAME ASS'Y(30).

<6> TUNER MODULE REMOVAL

1. Remove the Top Cover, referring to the previous step<1>.
2. Disconnect the FFC(13p) from connector(CN24) on the INPUT PCB(46).
3. Remove 2 screws(S12) and then remove Tuner Module(39).

<7> DIGITAL PCB REMOVAL

1. Remove the Top Cover, referring to the previous step<1>.
2. Remove the Av3+ box, referring to the previous step<2>.
3. Remove the Rear panel, referring to the previous step<4>.
4. Disconnect the FFC(CN33-25p) from connector(CN23) on the INPUT PCB(46).
5. Disconnect the FFC(CN31-25p) from connector(CN11) on the INPUT PCB(46).
6. Disconnect the FFC(CN32-29p) from connector(CN10) on the DVD PCB(49).
7. Disconnect the lead wire(CN72-6p) from BN72 on the VIDEO PCB(47).
8. Disconnect the lead wire(CN71-8p) from BN71 on the VIDEO PCB(47).
9. Disconnect the lead wire(CN35-2p) from JW11 on the INPUT PCB(46).
10. Disconnect the lead wire(CN34-6p) from BN34 on the FRONT PCB(44-2).
11. Remove the screw(S8) and then pull DIGITAL PCB(45) out.

<8> INPUT PCB REMOVAL

1. Remove the Top Cover, referring to the previous step<1>.
2. Remove the Av3+ box, referring to the previous step<2>.

3. Disconnect the FFC(CN24-13p) from Tuner Module(39).
4. Disconnect the FFC(CN23-25p) from connector(CN33) on the DIGITAL PCB(45).
5. Disconnect the FFC(CN11-25p) from connector(CN31) on the DIGITAL PCB(45).
6. Disconnect the FFC(CN12-17p) from connector(CN23) on the AMP PCB(48).
7. Disconnect the FFC(CN21-23p) from connector(CN11) on the AMP PCB(48).
8. Disconnect the lead wire(BN25-6p) from connector(CN25) on the SMALL CONNECTION PCB(44-7).
9. Disconnect the lead wire(BN26-7p) from connector(CN26) on the SMALL CONNECTION PCB(44-7).
10. Disconnect the lead wire(CN22-26p) from connector(CN83) on the FRONT PCB(44-1).
11. Disconnect the lead wire(CN13-8p) from conenctor(BN13) on the FRONT PCB(44-3).
12. Disconnect the lead wire(CN14-2p) from connector(JW51) on the AMP PCB(48).
13. Disconnect the lead wire(CN27-2p) from SMALL FAN(42).
14. Remove the screw(S8) on the INPUT PCB(46) and then remove the CONNECTION PCB(44-5).
15. Remove 5 screws(S12) on the Rear Panel(33) and then remove the INPUT PCB(46).

<9> VIDEO PCB REMOVAL

1. Remove the Top Cover, referring to the previous step<1>.
2. Remove the Av3+ box, referring to the previous step<2>.
3. Remove the Tuner Module, referring to the previous step<6>.
4. Remove the Digital pcb, referring to the previous step<7>.
5. Remove the Input pcb, referring to the previous step<8>.
6. Disconnect the lead wire(BN74) from connector(CN93) on the SMPS PCB(50).
7. Disconnect the lead wire(BN79) from connector(CN80) on the SMALL CONNECTION PCB(44-7)
8. Disconnect the lead wire(BN80) from connector(CN79) on the SMALL CONNECTION PCB(44-7)
9. Disconnect the lead wire(CN13) from DVD Mechanism Ass'y(43).
10. Remove the screw(S8) and then remove the CONNECTION PCB(44-5).
11. Remove 12 screws(S12) on the Rear Panel and then remove the Video pcb(47)

<10> AMP PCB REMOVAL

1. Remove the Top Cover, referring to the previous step<1>.
2. Remove the Av3+ box, referring to the previous step<2>.
3. Remove the Rear panel, referring to the previous step<4>.
4. Disconnect the FFC(CN23-17p) from connector(CN12) on the INPUT PCB(46).
5. Disconnect the FFC(CN11-23p) from connector(CN21) on the INPUT PCB(46).
6. Disconnect the lead wire(BN91) from connector(CT92) on the SMPS PCB(50).
7. Remove 3 screws(S8, S9) and then remove the AMP PCB(48).

<11> DVD PCB REMOVAL

1. Remove the Top Cover, referring to the previous step<1>.
2. Remove the Av3+ box, referring to the previous step<2>.
3. Remove the FRAME ASS'Y, referring to the previous step<5>.
4. Remove 2 screws(S9) and then remove the DVD PCB(49).

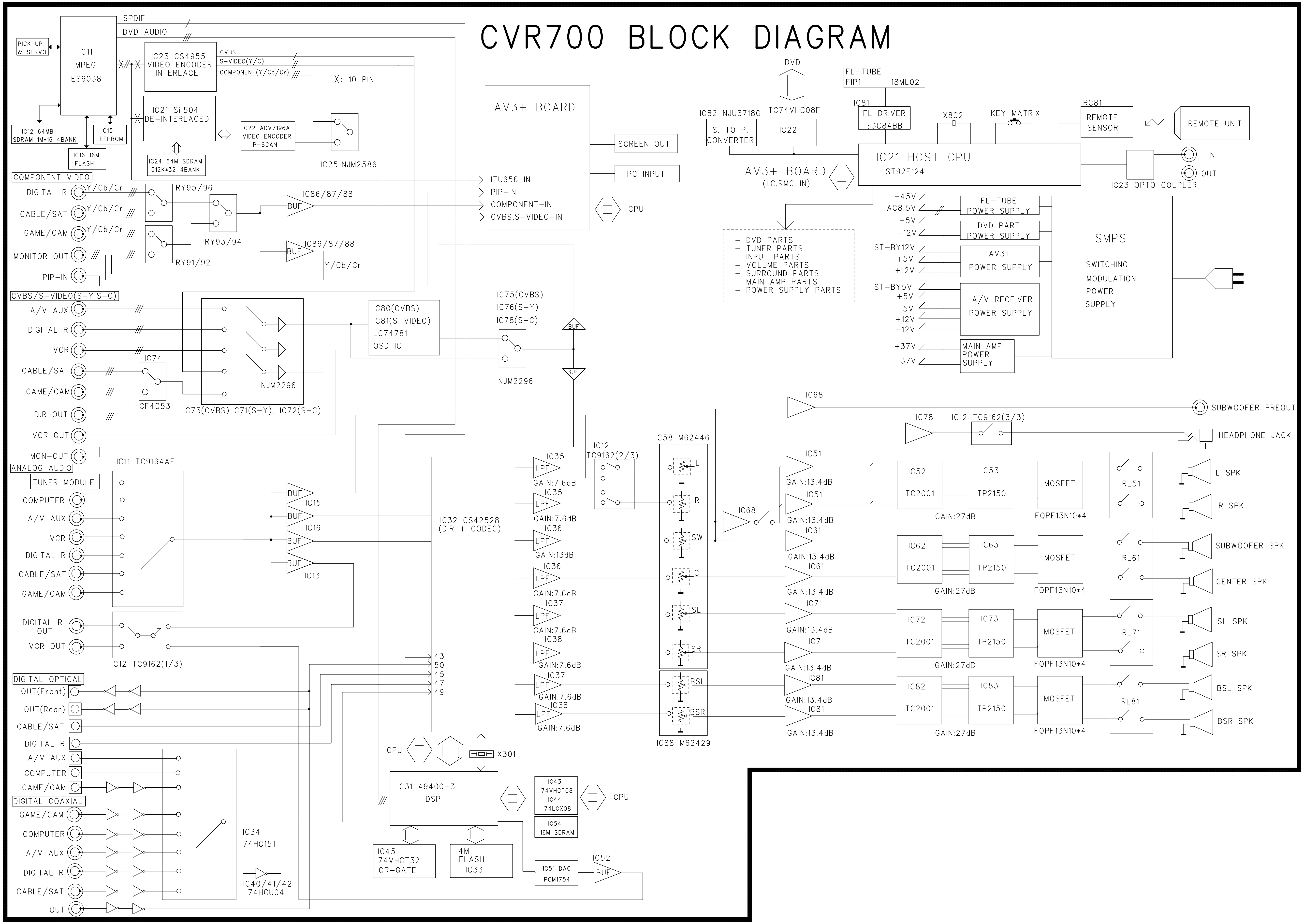
<12> SMPS PCB REMOVAL

1. Remove the Top Cover, referring to the previous step<1>.
2. Remove the Av3+ box, referring to the previous step<2>.
3. Remove the FRAME ASS'Y, referring to the previous step<5>.
4. Disconnect the lead wire(CT92) from BN91 on the AMP PCB(49).
5. Disconnect the lead wire(CN93) from BN74 on the VIDEO PCB(47).
6. Disconnect the lead wire(CN94) from BN11 on the CONNECTION PCB(44-5).
7. Remove 6 screws(S8, S9) and then remove the SMPS PCB(50).

<13> DVD MECHANISM REMOVAL

1. Remove the Top Cover, referring to the previous step<1>.
2. Remove the Av3+ box, referring to the previous step<2>.
3. Remove the FRAME ASS'Y, referring to the previous step<5>.
4. Remove the DVD PCB, referring to the previous step<11>.
5. Remove the lead wire(CN3-4p) from connector(CN13) on the VIDEO PCB(47).
6. Remove 6 screws(S8, S11) and then remove the DVD MECHANISM(43).

CVR700 BLOCK DIAGRAM


SPDIF
DVD AUDIO
PICK UP & SERVO
IC11 MPEG ES6038
IC23 CS4955 VIDEO ENCODER INTERLACE
CVBS
S-VIDEO(Y/C)
COMPONENT(Y/Cb/Cr)
X: 10 PIN
IC21 SiI504 DE-INTERLACED
IC22 ADV7196A VIDEO ENCODER P-SCAN
IC24 64M SDRAM 512K*32 4BANK
IC25 NJM2586
IC12 64MB SDRAM 1M*16 4BANK
IC15 EEPROM
IC16 16M FLASH
COMPONENT VIDEO
DIGITAL R
CABLE/SAT
GAME/CAM
MONITOR OUT
PIP-IN
Y/Cb/Cr
RY95/96
RY93/94
RY91/92
IC86/87/88
BUF
AV3+ BOARD
ITU656 IN
PIP-IN
COMPONENT-IN
CVBS,S-VIDEO-IN
SCREEN OUT
PC INPUT
CPU
CVBS/S-VIDEO(S-Y,S-C)
A/V AUX
VCR
IC74
HCF4053
IC73(CVBS) IC71(S-Y), IC72(S-C)
NJM2296
IC80(CVBS)
IC81(S-VIDEO)
LC74781
OSD IC
IC75(CVBS)
IC76(S-Y)
IC78(S-C)
D.R OUT
VCR OUT
MON-OUT
ANALOG AUDIO
TUNER MODULE
COMPUTER
IC11 TC9164AF
DIGITAL R OUT
IC12 TC9162(1/3)
IC15
IC16
IC13
IC32 CS42528 (DIR + CODEC)
43
50
45
47
49
DIGITAL OPTICAL
OUT(Front)
OUT(Rear)
DIGITAL COAXIAL
OUT
IC34 74HC151
IC40/41/42 74HCU04
IC31 49400-3 DSP
X301
IC43 74VHCT08
IC44 74LCX08
IC54 16M SDRAM
IC45 74VHCT32 OR-GATE
4M FLASH IC33
IC51 DAC PCM1754
IC52
IC35
IC36
IC37
IC38
LPF
GAIN:7.6dB
GAIN:13dB
IC12 TC9162(2/3)
IC58 M62446
IC88 M62429
L
R
SW
C
SL
SR
BSL
BSR
IC68
IC78
IC12 TC9162(3/3)
SUBWOOFER PREOUT
HEADPHONE JACK
IC51
IC61
IC71
IC81
GAIN:13.4dB
IC52 TC2001
IC53 TP2150
IC62 TC2001
IC63 TP2150
IC72 TC2001
IC73 TP2150
IC82 TC2001
IC83 TP2150
GAIN:27dB
MOSFET
FQPF13N10*4
RL51
RL61
RL71
RL81
L SPK
R SPK
SUBWOOFER SPK
CENTER SPK
SL SPK
SR SPK
BSL SPK
BSR SPK
DVD
IC82 NJU3718G
S. TO P. CONVERTER
TC74VHC08F
IC22
FL-TUBE FIP1 18ML02
IC81 FL DRIVER S3C84BB
X802
KEY MATRIX
RC81 REMOTE SENSOR
REMOTE UNIT
IC21 HOST CPU ST92F124
AV3+ BOARD (IIC,RMC IN)
IC23 OPTO COUPLER
IN
OUT
- DVD PARTS
- TUNER PARTS
- INPUT PARTS
- VOLUME PARTS
- SURROUND PARTS
- MAIN AMP PARTS
- POWER SUPPLY PARTS
+45V
AC8.5V
+5V
+12V
ST-BY12V
ST-BY5V
-5V
-12V
+37V
-37V
FL-TUBE POWER SUPPLY
DVD PART POWER SUPPLY
AV3+ POWER SUPPLY
A/V RECEIVER POWER SUPPLY
MAIN AMP POWER SUPPLY
SMPS
SWITCHING MODULATION POWER SUPPLY

AMPLIFIER SECTION DC OFFSET ADJUSTMENT

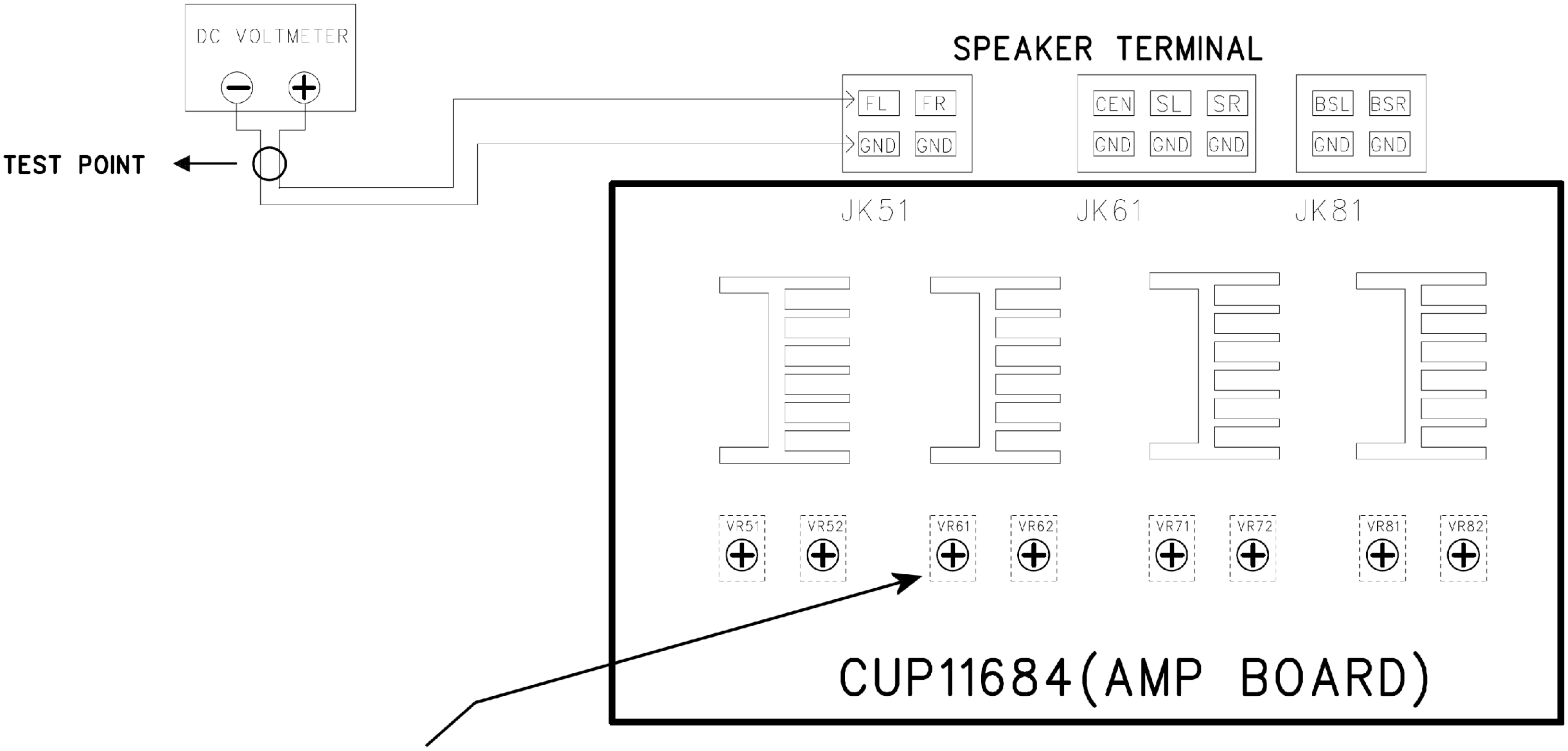
* MEASUREMENT CONDITIONS

: TURN ON MAIN POWER SWITCH AND HEAT UP THE AMPLIFIER ABOUT 10 MINUTES

: NO INPUT SIGNAL, VOLUME POSITION MINIMUM, **NO LOAD ON ANY SPEAKER TERMINALS**

* TARGET VALUE

: DC OFFSET VOLTAGE : 0 mV +/- 20 mV FOR EACH CHANNEL


DC VOLTMETER
TEST POINT
SPEAKER TERMINAL
FL
FR
GND
GND
CEN
SL
SR
GND
GND
GND
BSL
BSR
GND
GND
JK51
JK61
JK81
VR51
VR52
VR61
VR62
VR71
VR72
VR81
VR82
CUP11684(AMP BOARD)

* VR61 never needs adjustment - do not touch

DC VOLTMETER ... CONNECT TO SPK TERMINAL

NO.	CHANNEL	MEASUREMENT POINT	ALIGNMENT POT
1	FRONT LEFT	JK51	VR51
2	FRONT RIGHT	JK51	VR52
3	CENTER	JK61	VR62
4	SURROUND LEFT	JK61	VR71
5	SURROUND RIGHT	JK61	VR72
6	BACK SURROUND LEFT	JK81	VR81
7	BACK SURROUND RIGHT	JK81	VR82

JBL Cinema Vision™ Diagnostics

Troubleshooting routine for field service personnel

The purpose of this document is to try and isolate any video problems that could be attributed to either the:

1) **CVPD50 (Plasma Display Panel)**
2) **CVR700 circuitry (exempting the Shielded Video Control Box)**
3) **The Shielded Video Control Box in the CVR700**

Note: Do not confuse the Shielded Video Control Box in the CVR700 with the "Video Board", which is a different PCB in the unit. (See exploded view Pages 48-49).

It is important to check all items as outlined below before reaching final diagnosis.
For the following procedures, please refer to the drawing: *Test Set-up and connection diagram*

Symptom	Possible Cause	Solution
Unit does not turn ON	Digital Link Cable between CVPD50 PDP & CVR700 not (correctly) plugged in.	Check connections on both units and if connections seem OK, try another cable.
LED on CVPD50 PDP is blinking (amber)	Main Power Switch on CVPD50 PDP is turned OFF or AC cord is disconnected.	Check AC cord on both CVPD50 PDP and wall AC outlet, main power switch on the CVPD50 PDP

Be sure that no defective cables or defective customer equipment is the reason for a malfunction:

- Check visually that all cables look OK.
- Change the Digital Link cable between CVR700 and CVPD50 PDP with a known, tested one.
- Change the AC power-cord for the CVPD50 PDP with a known, tested one
- Change the video cables from the customer sources to the CVR700 with known, tested ones.
- Check the system with a known, tested video source (Composite (CVBS), S-Video (YC), Component (Y/Pb/Pr or YUV), DVI, VGA)

Possible malfunctions: CVPD50 PDP (Plasma Display Panel)

The following errors indicate a malfunction in the CVPD50 PDP (For testing, use the internal DVD player of the CVR 700)

- CVR700 turns on, LED on CVPD50 PDP turns green but Plasma doesn't turn on (check for the sound of a relay clicking inside the unit – no click sound means that SMPS did not turn on) → Defective Plasma SMPS)
- Pixel failures more than allowed in the specification → Plasma-panel itself defective
- Line-, column- or half-column-failures (e.g. permanently white or single-colored) → Plasma-panel itself defect

If any of the failures listed above are confirmed, the CVPD50 PDP needs to be returned to JBL as it is not field serviceable. Call 1-516-255-4525 for instructions.

Possible malfunctions: DVD/Receiver CVR700 (which includes Video signal processing for the CVPD50 PDP)

NOTE: The CVR700 is comprised of a DVD/Receiver platform and a high quality Shielded Video Control Box. This Video Board can be identified as the large shielded metal case that is mounted inside the CVR700. It is very important to positively identify whether the problem resides in the Video Board, or in the remainder of the CVR700 circuitry. The Video Board is not field-serviceable should be returned to JBL if found to be defective. Call 1-516-255-4525 for instructions.

JBL Cinema Vision™ Diagnostics (cont'd)

The following errors may indicate a malfunction in the CVR700:

- Diffused picture
- Jitter in the picture
- Bad greyscale picture quality
- Vertical or horizontal strips running across the picture

Connect a high quality Video Monitor or TV set to the three different types (Composite (CVBS), S-Video (Y/C) and Component (Y/Pb/Pr or YUV) of Monitor Outputs on the CVR700.

If picture is OK on all three inputs of the Video Monitor/TV, then the issue may be within the Shielded Video Control Box. Further testing should to be done. See next page for details.

If the problem can be seen at the video monitor outputs of the CVR700, then the issue is not with the Shielded Video Control Box. Disconnect the Video Monitor/TV and redirect your attention to the picture on the CVPD50 Plasma Display. Check if the above failures occur with all of the video-sources or only with one. In order to do this, an external source which can display the same test patterns in different video formats needs to be connected to CVR700.
If the problem occurs only with one video source, then a cable or video signal path circuitry inside the CVR700 may be at fault.

CAUTION: IMPORTANT SAFETY NOTE: Before removing the top cover of the CVR700, please disconnect the AC power cord. If the CVR700 must be operated with its top cover off, use an AC mains isolation transformer.

Refer to the drawing on last page of this section: *Test Set-up and connection diagram*

Check all shielded cables going to the interface board, which is inside the Shielded Video Control Box.
Check the 16 pin flex-cable (ITU-656), including the power-supply cable (7 pin CN-13 coming from the SMPS).

Possible malfunctions: DVD/Receiver CVR700 (which includes Video signal processing for CVPD50 PDP)

The Analog VGA PC and DVI/HDCP are directly connected to the Shielded Video Control Box. So if there is a failure in displaying these signals (provided all OSD adjustments are correct), the Video Board has a defect and needs to be replaced.

To check if the Shielded Video Control Box has any problems in displaying other types of signals, the following signals with corresponding test patterns should be applied to the following cables:

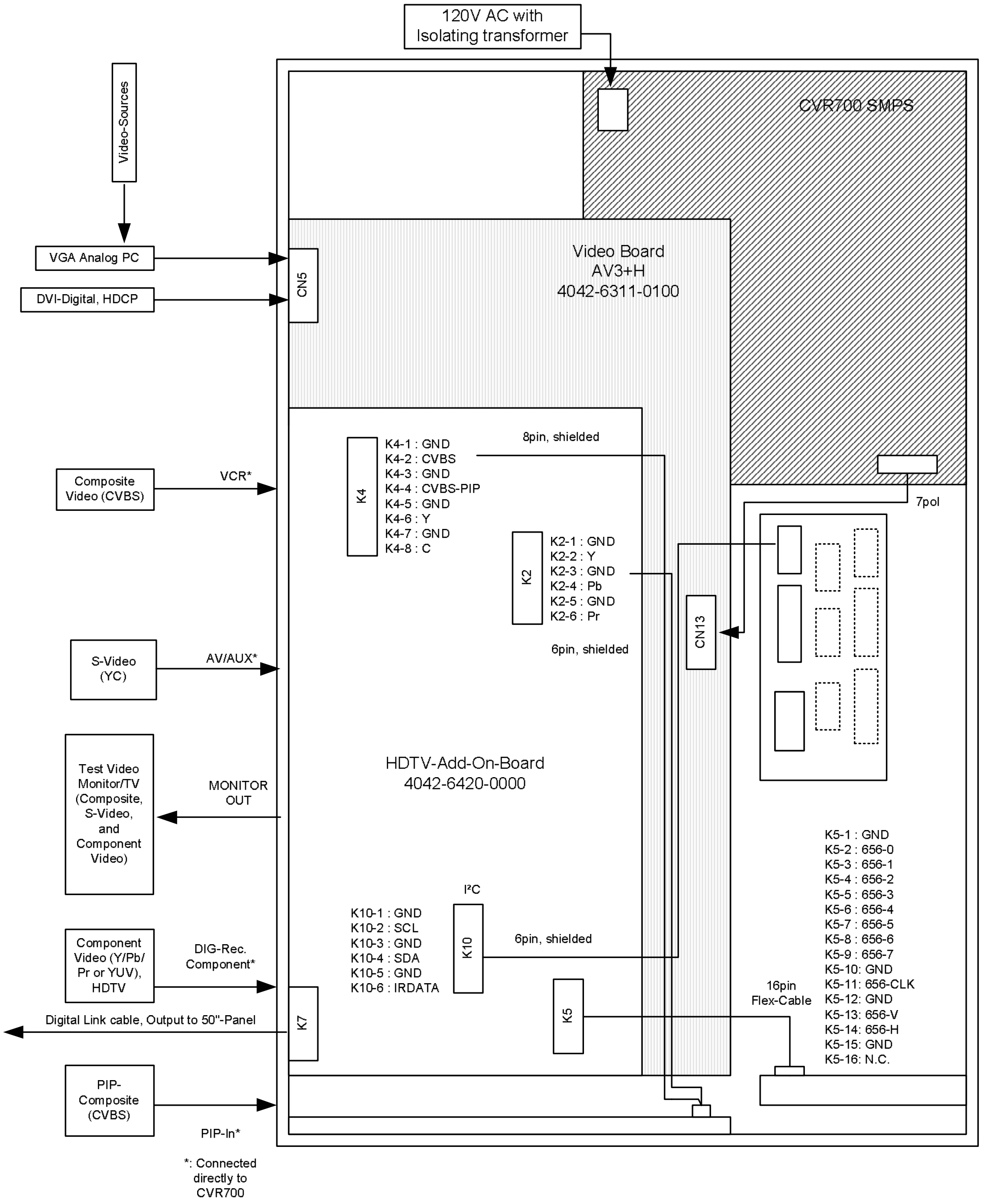
- ITU656-signals to the flex-cable
- Component Video (Y/Pb/Pr or YUV-, HDTV) signals to the 6pin-cable
- Composite Video (CVBS), PIP Composite Video, S-Video (YC) signals to the 8pin-cable
- I²C-commands for switching on and off to another 6 pin-cable

The easiest way to apply these signals is to use an operational CVR700 and adapting the corresponding cables. Please be sure that the quality of the adapter is OK, otherwise the image quality may be unacceptable.

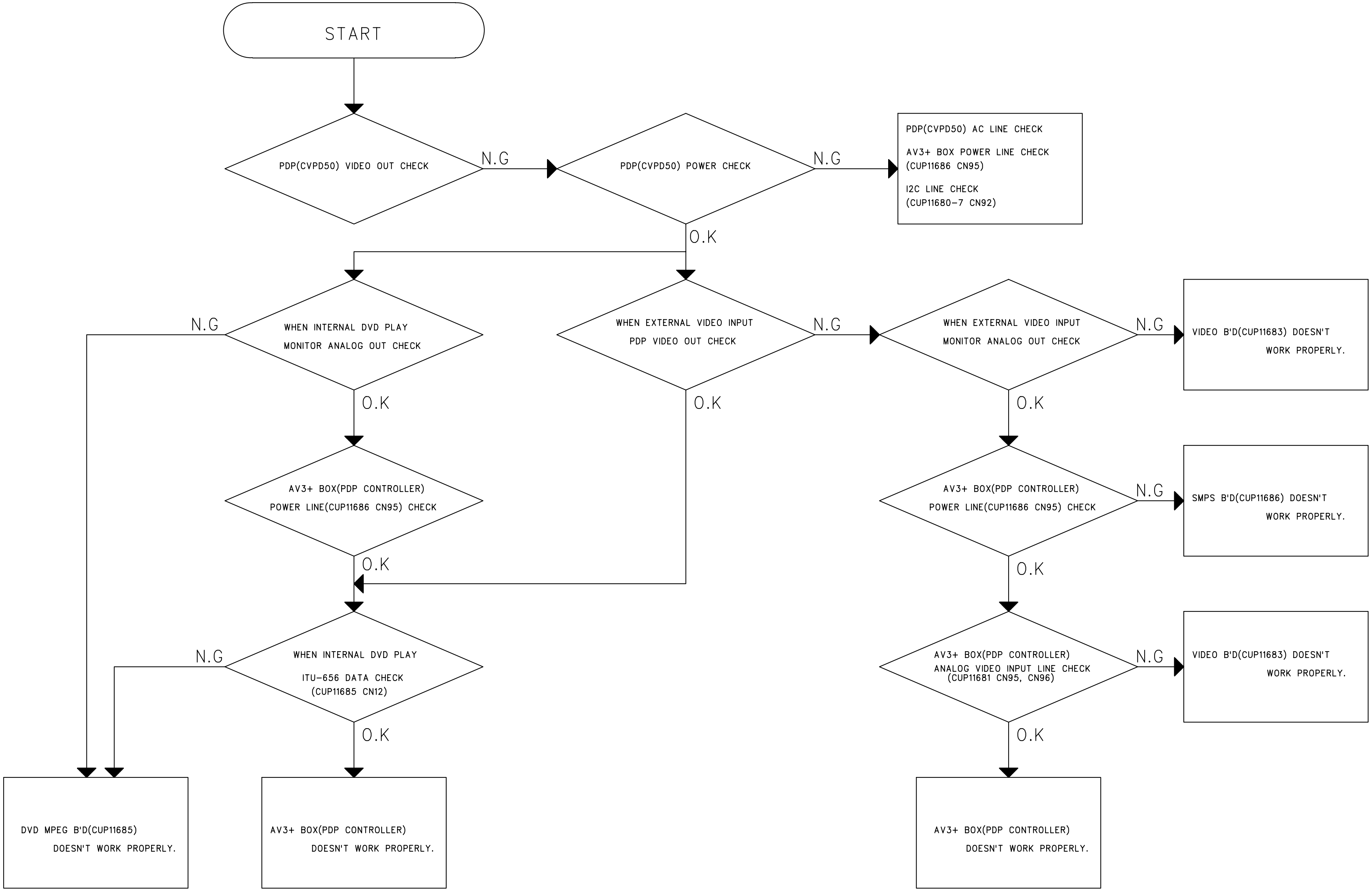
If the malfunction with the external signals is the same as with the internal signals the error is on the Shielded Video Control Box. Otherwise the issue is located in the CVR700 DVD-Receiver.

JBL Cinema Vision™ Diagnostics (cont'd)

Test Set-up and Connection Diagram


120V AC with
Isolating transformer
CVR700 SMPS
Video-Sources
VGA Analog PC
DVI-Digital, HDCP
CN5
Video Board
AV3+H
4042-6311-0100
8pin, shielded
K4
K4-1 : GND
K4-2 : CVBS
K4-3 : GND
K4-4 : CVBS-PIP
K4-5 : GND
K4-6 : Y
K4-7 : GND
K4-8 : C
Composite Video (CVBS)
VCR*
K2
K2-1 : GND
K2-2 : Y
K2-3 : GND
K2-4 : Pb
K2-5 : GND
K2-6 : Pr
7pol
CN13
6pin, shielded
S-Video (YC)
AV/AUX*
HDTV-Add-On-Board
4042-6420-0000
Test Video Monitor/TV (Composite, S-Video, and Component Video)
MONITOR OUT
K5-1 : GND
K5-2 : 656-0
K5-3 : 656-1
K5-4 : 656-2
K5-5 : 656-3
K5-6 : 656-4
K5-7 : 656-5
K5-8 : 656-6
K5-9 : 656-7
K5-10: GND
K5-11: 656-CLK
K5-12: GND
K5-13: 656-V
K5-14: 656-H
K5-15: GND
K5-16: N.C.
I²C
K10-1 : GND
K10-2 : SCL
K10-3 : GND
K10-4 : SDA
K10-5 : GND
K10-6 : IRDATA
K10
6pin, shielded
Component Video (Y/Pb/ Pr or YUV), HDTV
DIG-Rec. Component*
16pin Flex-Cable
K5
K7
Digital Link cable, Output to 50"-Panel
PIP-Composite (CVBS)
PIP-In*
*: Connected directly to CVR700

* Video signals should be connected directly to the CV700 Video inputs


START
PDP(CVPD50) VIDEO OUT CHECK
N.G
PDP(CVPD50) POWER CHECK
N.G
PDP(CVPD50) AC LINE CHECK
AV3+ BOX POWER LINE CHECK
(CUP11686 CN95)
I2C LINE CHECK
(CUP11680-7 CN92)
O.K
WHEN INTERNAL DVD PLAY
MONITOR ANALOG OUT CHECK
N.G
WHEN EXTERNAL VIDEO INPUT
PDP VIDEO OUT CHECK
N.G
WHEN EXTERNAL VIDEO INPUT
MONITOR ANALOG OUT CHECK
N.G
VIDEO B'D(CUP11683) DOESN'T WORK PROPERLY.
O.K
O.K
O.K
AV3+ BOX(PDP CONTROLLER)
POWER LINE(CUP11686 CN95) CHECK
AV3+ BOX(PDP CONTROLLER)
POWER LINE(CUP11686 CN95) CHECK
N.G
SMPS B'D(CUP11686) DOESN'T WORK PROPERLY.
O.K
O.K
N.G
WHEN INTERNAL DVD PLAY
ITU-656 DATA CHECK
(CUP11685 CN12)
AV3+ BOX(PDP CONTROLLER)
ANALOG VIDEO INPUT LINE CHECK
(CUP11681 CN95, CN96)
N.G
VIDEO B'D(CUP11683) DOESN'T WORK PROPERLY.
O.K
O.K
DVD MPEG B'D(CUP11685) DOESN'T WORK PROPERLY.
AV3+ BOX(PDP CONTROLLER) DOESN'T WORK PROPERLY.
AV3+ BOX(PDP CONTROLLER) DOESN'T WORK PROPERLY.

CVR700 ELECTRICAL PARTS LIST

Ref. Designator	Part Number	Description		Qty	
FRONT PCB CUP11680Y					
Capacitors					
C171	CCEA1CH221T	CAP , ELECT	220UF 16V	1	EA
C175	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C176	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C177	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z	1	EA
C801	HCBS1H821KBT	CAP , CERAMIC	820PF 50V K	1	EA
C802	CCEA1AKS470T	CAP. ELECT	47UF 10V	1	EA
C808	HCBS1H821KBT	CAP , CERAMIC	820PF 50V K	1	EA
C814	HCBS1H821KBT	CAP , CERAMIC	820PF 50V K	1	EA
C817	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z	1	EA
C818	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z	1	EA
C820	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z	1	EA
C821	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z	1	EA
C828	HCBS1H471KBT	CAP , CHIP , 1608 SIZE	470PF 50V K	1	EA
C829	HCBS1H471KBT	CAP , CHIP , 1608 SIZE	470PF 50V K	1	EA
C830	HCBS1H471KBT	CAP , CHIP , 1608 SIZE	470PF 50V K	1	EA
C831	HCBS1H471KBT	CAP , CHIP , 1608 SIZE	470PF 50V K	1	EA
C832	HCBS1H471KBT	CAP , CHIP , 1608 SIZE	470PF 50V K	1	EA
C833	HCBS1H471KBT	CAP , CHIP , 1608 SIZE	470PF 50V K	1	EA
C834	HCBS1H471KBT	CAP , CHIP , 1608 SIZE	470PF 50V K	1	EA
C835	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z	1	EA
C836	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z	1	EA
C837	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C840	HCBS1H221KBT	CAP , CERAMIC	220PF 50V K	1	EA
C841	HCBS1H221KBT	CAP , CERAMIC	220PF 50V K	1	EA
C842	HCBS1H221KBT	CAP , CERAMIC	220PF 50V K	1	EA
C843	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z	1	EA
C844	CCEA1AKS221T	CAP, ELECT	220UF 10V	1	EA
C845	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z	1	EA
C846	HCBS1H220JCT	CAP , CERAMIC	22PF 50V J	1	EA
C847	HCBS1H220JCT	CAP , CERAMIC	22PF 50V J	1	EA
C848	CCEA1HH100T	CAP. ELECT	10UF 50V	1	EA
C849	HCBS1H104ZFT	CAP , CERAMIC	0.1UF 50V Z	1	EA
C851	CCEA1AKS221T	CAP, ELECT	220UF 10V	1	EA
C852	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z	1	EA
C853	CCEA1HH4R7T	CAP , ELECT	4.7UF 50V	1	EA
C854	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C855	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C856	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z	1	EA
C861	HCBS1H101KBT	CAP , CERAMIC	100PF 50V K	1	EA
C862	CCEA1CH470T	CAP , ELECT	47UF 25V	1	EA
C863	HCBS1H103ZFT	CAP , CERAMIC	0.01UF 50V Z	1	EA
C865	HCBS1H103ZFT	CAP , CERAMIC	0.01UF 50V Z	1	EA
C867	HCBS1H104ZFT	CAP , CERAMIC	0.1UF 50V Z	1	EA
C871	HCBS1H151KBT	CAP , CERAMIC	150PF 50V K	1	EA
C872	HCBS1H151KBT	CAP , CERAMIC	150PF 50V K	1	EA
C873	HCBS1H150JCT	CAP , CERAMIC	15PF 50V J	1	EA
C874	HCBS1H150JCT	CAP , CERAMIC	15PF 50V J	1	EA
C875	HCBS1H150JCT	CAP , CERAMIC	15PF 50V J	1	EA
C876	HCBS1H151KBT	CAP , CERAMIC	150PF 50V K	1	EA
C879	HCBS1H151KBT	CAP , CERAMIC	150PF 50V K	1	EA
C880	HCBS1H151KBT	CAP , CERAMIC	150PF 50V K	1	EA
C881	HCBS1H104ZFT	CAP , CERAMIC	0.1UF 50V Z	1	EA
C882	HCBS1H104ZFT	CAP , CERAMIC	0.1UF 50V Z	1	EA
C891	HCBS1H104ZFT	CAP , CERAMIC	0.1UF 50V Z	1	EA
C892	CCKT1H103ZF	CAP , CERAMIC	0.01UF 50V ZF	1	EA
C893	CCKT1H103ZF	CAP , CERAMIC	0.01UF 50V ZF	1	EA
C894	CCEA1HH1R0T	CAP , ELECT		1	EA
Semiconductors					
D802	HVD1SS133MT	DIODE	1SS133T-77	1	EA

Ref. Designator	Part Number	Description		Qty	
FRONT PCB CUP11680Y					
D803	HVD1SS133MT	DIODE	1SS133T-77	1	EA
D881	HVD1SS133MT	DIODE	1SS133T-77	1	EA
D882	HVD1SS133MT	DIODE	1SS133T-77	1	EA
D883	HVD1SS133MT	DIODE	1SS133T-77	1	EA
D884	HVD1SS133MT	DIODE	1SS133T-77	1	EA
D891	HVD1SS133MT	DIODE	1SS133T-77	1	EA
D892	HVD1SS133MT	DIODE	1SS133T-77	1	EA
Q173	KVTKSC2785YT	TRANSISTOR	KSC2785Y	1	EA
Q174	KVTKSC2785YT	TRANSISTOR	KSC2785Y	1	EA
Q175	HVTKRA102MT	TRANSISTOR	KRA102M	1	EA
Q850	HVTKRC102MT	TRANSISTOR	KRC102M	1	EA
Q851	KVTKSA1175YT	TRANSISTOR	KSA1175Y	1	EA
Q852	HVTKRC102MT	TRANSISTOR	KRC102M	1	EA
Q171	HVTKSB1151Y	TRANSISTOR	KSB1151Y	1	EA
Q172	HVTKSB1151Y	TRANSISTOR	KSB1151Y	1	EA
Q863	KVTKSC2785YT	TRANSISTOR	KSC2785Y	1	EA
D801	CVD50BOGDWGA	L.E.D , 2 COLOR		1	EA
IC81	HVIS3F84BB	I.C , FLASH U-COM	S3F84BB	1	EA
Resistors					
R171	CRD20TJ223T	RES , CARBON	22K OHM 1/5W J	1	EA
R172	CRD20TJ473T	RES , CARBON	47K OHM 1/5W J	1	EA
R173	CRD20TJ152T	RES , CARBON	1.5K OHM 1/5W J	1	EA
R174	CRD20TJ332T	RES , CARBON	3.3K OHM 1/5W J	1	EA
R175	CRD20TJ473T	RES , CARBON	47K OHM 1/5W J	1	EA
R176	CRD20TJ331T	RES , CARBON	330 OHM 1/5W J	1	EA
R177	CRD20TJ332T	RES , CARBON	3.3K OHM 1/5W J	1	EA
R178	CRD20TJ223T	RES , CARBON	22K OHM 1/5W J	1	EA
R801	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J	1	EA
R802	CRD20TJ152T	RES , CARBON	1.5K OHM 1/5W J	1	EA
R803	CRD20TJ182T	RES , CARBON	1.8K OHM 1/5W J	1	EA
R804	CRD20TJ272T	RES , CARBON	2.7K OHM 1/5W J	1	EA
R805	CRD20TJ332T	RES , CARBON	3.3K OHM 1/5W J	1	EA
R806	CRD20TJ562T	RES , CARBON	5.6K OHM 1/5W J	1	EA
R808	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J	1	EA
R809	CRD20TJ152T	RES , CARBON	1.5K OHM 1/5W J	1	EA
R810	CRD20TJ182T	RES , CARBON	1.8K OHM 1/5W J	1	EA
R811	CRD20TJ272T	RES , CARBON	2.7K OHM 1/5W J	1	EA
R812	CRD20TJ332T	RES , CARBON	3.3K OHM 1/5W J	1	EA
R814	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J	1	EA
R815	CRD20TJ152T	RES , CARBON	1.5K OHM 1/5W J	1	EA
R817	CRD20TJ272T	RES , CARBON	2.7K OHM 1/5W J	1	EA
R818	CRD20TJ272T	RES , CARBON	2.7K OHM 1/5W J	1	EA
R819	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J	1	EA
R820	CRD20TJ272T	RES , CARBON	2.7K OHM 1/5W J	1	EA
R821	CRD20TJ272T	RES , CARBON	2.7K OHM 1/5W J	1	EA
R822	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J	1	EA
R823	CRD20TJ473T	RES , CARBON	47K OHM 1/5W J	1	EA
R824	CRD20TJ473T	RES , CARBON	47K OHM 1/5W J	1	EA
R825	CRD20TJ473T	RES , CARBON	47K OHM 1/5W J	1	EA
R826	CRD20TJ473T	RES , CARBON	47K OHM 1/5W J	1	EA
R828	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J	1	EA
R829	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J	1	EA
R830	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J	1	EA
R831	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J	1	EA
R832	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J	1	EA
R833	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J	1	EA
R834	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J	1	EA
R835	CRD20TJ1R0T	RES , CARBON	1 OHM 1/5W J	1	EA
R836	CRD20TJ1R0T	RES , CARBON	1 OHM 1/5W J	1	EA
R837	CRD20TJ470T	RES , CARBON	47 OHM 1/5W J	1	EA
R838	CRD20TJ470T	RES , CARBON	47 OHM 1/5W J	1	EA
R839	CRD20TJ470T	RES , CARBON	47 OHM 1/5W J	1	EA
R840	CRD20TJ470T	RES , CARBON	47 OHM 1/5W J	1	EA
R841	CRD20TJ470T	RES , CARBON	47 OHM 1/5W J	1	EA

Ref. Designator	Part Number	Description		Qty	
FRONT PCB CUP11680Y					
R843	CRD20TJ332T	RES , CARBON	3.3K OHM 1/5W J	1	EA
R844	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J	1	EA
R845	CRD20TJ330T	RES , CARBON	33 OHM 1/5W J	1	EA
R846	CRD20TJ330T	RES , CARBON	33 OHM 1/5W J	1	EA
R847	CRD20TJ330T	RES , CARBON	33 OHM 1/5W J	1	EA
R848	CRD20TJ330T	RES , CARBON	33 OHM 1/5W J	1	EA
R850	CRD20TJ103T	RES , CARBON	10K OHM 1/5W J	1	EA
R851	CRD20TJ1R0T	RES , CARBON	1 OHM 1/5W J	1	EA
R852	CRD20TJ103T	RES , CARBON	10K OHM 1/5W J	1	EA
R853	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J	1	EA
R854	CRD20TJ103T	RES , CARBON	10K OHM 1/5W J	1	EA
R855	CRD20TJ471T	RES , CARBON	470 OHM 1/5W J	1	EA
R856	CRD20TJ181T	RES , CARBON	180 OHM 1/5W J	1	EA
R857	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J	1	EA
R861	CRD20TJ750T	RES , CARBON	75 OHM 1/5W J	1	EA
R862	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J	1	EA
R864	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J	1	EA
R865	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J	1	EA
R866	CRD20TJ182T	RES , CARBON	1.8K OHM 1/5W J	1	EA
R867	CRD20TJ272T	RES , CARBON	2.7K OHM 1/5W J	1	EA
R871	CRD20TJ750T	RES , CARBON	75 OHM 1/5W J	1	EA
R872	CRD20TJ750T	RES , CARBON	75 OHM 1/5W J	1	EA
R873	CRD20TJ750T	RES , CARBON	75 OHM 1/5W J	1	EA
R874	CRD20TJ750T	RES , CARBON	75 OHM 1/5W J	1	EA
R875	CRD20TJ750T	RES , CARBON	75 OHM 1/5W J	1	EA
R876	CRD20TJ750T	RES , CARBON	75 OHM 1/5W J	1	EA
R877	CRD20TJ471T	RES , CARBON	470 OHM 1/5W J	1	EA
R878	CRD20TJ471T	RES , CARBON	470 OHM 1/5W J	1	EA
R879	CRD20TJ224T	RES , CARBON	220 KOHM 1/5W J	1	EA
R880	CRD20TJ224T	RES , CARBON	220 KOHM 1/5W J	1	EA
R881	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J	1	EA
R891	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J	1	EA
R868	CRD20TJ471T	RES , CARBON	470 OHM 1/5W J	1	EA
Miscellaneous					
VR81	HSR2A029Z	VR , ENCODER		1	EA
VR82	HSR2A015Z	ENCODER		1	EA
FIP1	HFLHCA18ML02	VFD	HCA-18ML02	1	EA
S801	HST1A020ZT	SW , TACT		1	EA
S802	HST1A020ZT	SW , TACT		1	EA
S803	HST1A020ZT	SW , TACT		1	EA
S804	HST1A020ZT	SW , TACT		1	EA
S805	HST1A020ZT	SW , TACT		1	EA
S806	HST1A020ZT	SW , TACT		1	EA
S807	HST1A020ZT	SW , TACT		1	EA
S808	HST1A020ZT	SW , TACT		1	EA
S809	HST1A020ZT	SW , TACT		1	EA
S810	HST1A020ZT	SW , TACT		1	EA
S811	HST1A020ZT	SW , TACT		1	EA
S812	HST1A020ZT	SW , TACT		1	EA
S813	HST1A020ZT	SW , TACT		1	EA
S814	HST1A020ZT	SW , TACT		1	EA
S815	HST1A020ZT	SW , TACT		1	EA
S816	HST1A020ZT	SW , TACT		1	EA
BD11	KLZ9H001Z	BEAD , CORE		1	EA
BD12	KLZ9H001Z	BEAD , CORE		1	EA
BK81	CMD1A387	BRACKET , PCB		1	EA
BK82	CMD1A387	BRACKET , PCB		1	EA
BK83	CMD1A387	BRACKET , PCB		1	EA
BK84	CMD1A209	BRACKET , FLT	A4-92-1739	1	EA
BK85	CMD1A209	BRACKET , FLT	A4-92-1739	1	EA
BK86	CMD1A209	BRACKET , FLT	A4-92-1739	1	EA
BN11	CWB2B008250EW	WIRE ASS'Y		1	EA
BN12	KJP06GB99ZM	CONNECTOR	MOLEX35237-0610	1	EA
BN13	CWZCVR700BN13	SHIELD WIRE ASS'Y		1	EA

Ref. Designator	Part Number	Description		Qty	
FRONT PCB CUP11680Y					
BN34	CWZCVR700BN34	SHIELD WIRE ASS'Y		1	EA
BN73	KJP15GB99ZM	WAFER	35237(15PIN)	1	EA
BN75	KJP12GB99ZM	CONNECTOR		1	EA
BN77	CWZCVR700BN77	SHIELD WIRE ASS'Y		1	EA
BN78	CWZCVR700BN78	SHIELD WIRE ASS'Y		1	EA
BN81	CWB1C004100EN	WIRE ASS'Y		1	EA
BN88	CWB1C005150EW	WIRE ASS'Y		1	EA
BN91	CWB2B006250EN	WIRE ASS'Y		1	EA
CN21	KJP15GA98ZM	WAFER	MOLEX35336-1510	1	EA
CN22	KJP12GA98ZM	WAFER		1	EA
CN25	KJP07GA19ZM	WAFER	MOLEX53014-0710	1	EA
CN26	KJP07GA19ZM	WAFER	MOLEX53014-0710	1	EA
CN75	KJP02GA01ZM	WAFER	MOLEX 5267-02A	1	EA
CN77	KJP06GA19ZM	WAFER	MOLEX53014-0610	1	EA
CN78	KJP06GA01ZM	WAFER	MOLEX 5267-06A	1	EA
CN79	KJP06GA19ZM	WAFER	MOLEX53014-0610	1	EA
CN80	KJP06GA01ZM	WAFER	MOLEX 5267-06A	1	EA
CN82	KJP04GA19ZM	WAFER		1	EA
CN83	CJP26GA147ZW	26 DUAL WAFER	JWT	1	EA
CN88	KJP05GB46ZM	WAFER	MOLEX 53015	1	EA
CN91	KJP06GA19ZM	WAFER	MOLEX53014-0610	1	EA
CN92	CJP06GA170ZW	WAFER	CVR700	1	EA
CN93	KJP07GA19ZM	WAFER	MOLEX53014-0710	1	EA
CN94	KJP06GA19ZM	WAFER	MOLEX53014-0610	1	EA
ET81	CNE75	PLATE , EARTH		1	EA
ET82	CMC1A111	PLATE , EARTH		1	EA
JK81	CJJ4S035Z	JACK , BOARD(G/B/R) PLATE		1	EA
JK82	CJJ4S023Y	JACK , BOARD		1	EA
JK83	CJJ9M003Z	JACK , S-VIDEO		1	EA
JK86	CJJ4M041Y	JACK , BOARD (COAX)		1	EA
JK87	HJSTORX179L	MODULE , OPTICAL(RX)	TORX179L	1	EA
JK88	HJSTOTX179L	MODULE , OPTICAL(TX)	TOTX179L	1	EA
JK89	CJJ2E026Z	JACK , HEADPHONE(SILVER PLATE)		1	EA
JW81	CWE8202150RV	WIRE ASS'Y		1	EA
JW83	CWE8202080RV	WIRE , ASS'Y(1P)		1	EA
JW85	CWE8202150RV	WIRE ASS'Y		1	EA
JW86	CWE8202080RV	WIRE , ASS'Y(1P)		1	EA
L801	HLQ02C100KT	COIL , AXAIL		1	EA
L802	HLQ02C100KT	COIL , AXAIL		1	EA
RC81	HRVRPM6938H4	SENSOR , REMOTE	RPM6938-H4	1	EA
X801	HOX10000E220C	CRYSTAL	10MHZ	1	EA
	CTB3+10G	SCREW		23	EA
	CTB3+16GFZ	SCREW		4	EA
	CTB3+6F	SCREW		3	EA
	CTS3+10GFC	SCREW		2	EA
	CUS1A122	SPRING , DOOR	QDR-3500	1	EA
	CUS2A137	SPRING , LOCK		1	EA
	CWZCVR700BN83	WIRE ASS'Y		1	EA
	KJC1A007	MAGENT	CVR700	1	EA
	CHG1A113	RUBBER		1	EA
	CHG1A218	CUSHION		5	EA
	CKC2B153S46	CABINET,TOP		1	EA
	CTB3+8J	SCREW		5	EA
	CTB3+8JFC	SCREW		14	EA
	CTB4+6FFC	SCREW		6	EA
	CTS3+8J	SCREW		3	EA
	CUACVR700	BOTTOM CHASSIS ASS'Y		1	EA
	CHD1A036FZ	SCREW , SPECIAL	AVR330/AVR4600	4	EA
	CHD1A051	SCREW , SPECIAL	CVR700	4	EA
	CHE1A030	HOLDER , PCB		7	EA
	CHG1A160	RUBBER	H=16 (15X20)	2	EA
	CHG1A219	RUBBER(A)	T=1.0	10	EA
	CHG1A283	RUBBER	CVR700	4	EA
	CHG1A311	RUBBER , FAN		1	EA
	CJA523FBYA	CORD , POWER		1	EA

Ref. Designator	Part Number	Description		Qty	
DVD LOADER (FRONT END) PCB					
Capacitors					
BC01	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC02	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC03	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC04	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC05	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC06	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC07	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC08	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC09	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
DVD LOADER (FRONT END) PCB					
BC10	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC11	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC12	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC13	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC14	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC15	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC16	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC17	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC18	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC19	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC20	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
BC21	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C001	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C002	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C004	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C005	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C006	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C008	HCUS1H682KB	CAP, CERAMIC, 1608 (PHILIPS)	0.0068UF 50V K	1	EA
C009	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C010	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C011	HCUS1H471JA	CAP , CHIP	470PF 50V J	1	EA
C012	HCUS1H471JA	CAP , CHIP	470PF 50V J	1	EA
C013	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C014	HCUS1H470JA	CAP , CHIP	47PF 50V J	1	EA
C016	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C017	HCUS1H561JA	CAP , CHIP	560PF 50V J	1	EA
C018	HCUS1H473ZF	CAP , CHIP	0.047UF 50V Z	1	EA
C019	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C020	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C021	HCUS1H102KB	CAP , CHIP	0.001UF 50V K	1	EA
C022	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C024	HCUS1H681JA	CAP , CHIP	680PF 50V J	1	EA
C025	HCUS1H681JA	CAP , CHIP	680PF 50V J	1	EA
C026	HCUS1H681JA	CAP , CHIP	680PF 50V J	1	EA
C027	HCUS1H681JA	CAP , CHIP	680PF 50V J	1	EA
C028	HCUS1H101JA	CAP , CHIP	100PF 50V J	1	EA
C029	HCUS1H472KC	CAP , CHIP	1608 SIZE	1	EA
C030	HCUS1H102KB	CAP , CHIP	0.001UF 50V K	1	EA
C031	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C032	HCUS1H161JA	CAP , CHIP	160PF 50V J	1	EA
C033	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C034	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C035	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C036	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C037	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C038	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C040	HCUS1C105ZF	CAP , CHIP	1UF 50V Z	1	EA
C041	HCUS1C105ZF	CAP , CHIP	1UF 50V Z	1	EA
C042	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C043	HCUS1H102KB	CAP , CHIP , 1608 SIZE	0.001UF 50V K	1	EA
C045	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C046	HCUS1E334ZF	CAP , CHIP , 1608 SIZE	0.33UF 25V Z	1	EA
C047	HCUS1H473ZF	CAP , CHIP , 1608 SIZE	0.047UF 50V Z	1	EA

Ref. Designator	Part Number	Description		Qty	
DVD LOADER (FRONT END) PCB					
C048	HCUS1H102KB	CAP , CHIP , 1608 SIZE	0.001UF 50V K	1	EA
C049	HCUS1H391JA	CAP , CHIP , 1608 SIZE	390PF 50V J	1	EA
C050	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C053	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C054	HCUS1H100JA	CAP , CHIP	10PF 50V J	1	EA
C055	HCUS1H100JA	CAP , CHIP	10PF 50V J	1	EA
C056	HCUS1H100JA	CAP , CHIP	10PF 50V J	1	EA
C057	HCUS1H100JA	CAP , CHIP	10PF 50V J	1	EA
C058	HCUS1H100JA	CAP , CHIP	10PF 50V J	1	EA
C059	HCUS1H100JA	CAP , CHIP	10PF 50V J	1	EA
C060	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C061	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z	1	EA
C062	HCUS1H472KC	CAP , CHIP , 1608 SIZE	0.0047UF 50V K	1	EA
C063	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C064	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C065	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C066	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C067	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C068	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C069	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C070	HCUS1H681JA	CAP , CHIP , 1608 SIZE	680PF 50V J	1	EA
C071	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C072	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C073	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C074	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C075	HCUS1C105ZF	CAP , CHIP , 1608 SIZE	1UF 50V Z	1	EA
C076	HCUS1H681JA	CAP , CHIP , 1608 SIZE	680PF 50V J	1	EA
C078	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C079	HCUS1C105ZF	CAP , CHIP , 1608 SIZE	1UF 50V Z	1	EA
C080	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C081	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C082	HCUS1C105ZF	CAP , CHIP , 1608 SIZE	1UF 50V Z	1	EA
C083	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C084	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C085	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
C091	HCUS1H330JC	CAP , CHIP , 1608 SIZE	33PF 50V J	1	EA
C092	HCUS1H330JC	CAP , CHIP , 1608 SIZE	33PF 50V J	1	EA
C093	HCUS1H330JC	CAP , CHIP , 1608 SIZE	33PF 50V J	1	EA
C094	HCUS1H102KB	CAP , CHIP , 1608 SIZE	0.001UF 50V K	1	EA
C095	HCUS1H102KB	CAP , CHIP , 1608 SIZE	0.001UF 50V K	1	EA
C099	HCUS1H104ZF	CAP , CHIP , 1608 SIZE	0.1UF 50V Z	1	EA
TC01	HCEC0JRV2221T	CAP, ELECT 220U/6.3V(PARTSNIC)	CM 6.3WV 220UF	1	EA
TC02	HCEC1CRV2220T	CAP , ELEC (SMD)	22UF/16V	1	EA
TC03	HCEC0JRV2221T	CAP, ELECT 220U/6.3V(PARTSNIC)	CM 6.3WV 220UF	1	EA
TC04	HCEC1CRV2101T	CAP , ELECT (SMD)	100UF / 16V	1	EA
TC05	HCEC1CRV2220T	CAP , ELEC (SMD)	22UF/16V	1	EA
TC06	HCEC1CRV2220T	CAP , ELEC (SMD)	22UF/16V	1	EA
TC07	HCEC1CRV2220T	CAP , ELEC (SMD)	22UF/16V	1	EA
TC08	HCEC1CRV2101T	CAP , ELECT (SMD)	100UF / 16V	1	EA
TC09	HCEC0JRV2221T	CAP, ELECT 220U/6.3V(PARTSNIC)	CM 6.3WV 220UF	1	EA
TC10	HCEC0JRV2221T	CAP, ELECT 220U/6.3V(PARTSNIC)	CM 6.3WV 220UF	1	EA
TC12	HCEC1CRV2101T	CAP , ELECT (SMD)	100UF / 16V	1	EA
TC16	HCEC0JRV2221T	CAP, ELECT 220U/6.3V(PARTSNIC)	CM 6.3WV 220UF	1	EA
TC18	HCEC0JRV2221T	CAP, ELECT 220U/6.3V(PARTSNIC)	CM 6.3WV 220UF	1	EA
TC19	HCEC0JRV2221T	CAP, ELECT 220U/6.3V(PARTSNIC)	CM 6.3WV 220UF	1	EA
TC21	HCEC0JRV2221T	CAP, ELECT 220U/6.3V(PARTSNIC)	CM 6.3WV 220UF	1	EA
TC23	HCEC1CRV2220T	CAP , ELEC (SMD)	22UF/16V	1	EA
TC25	HCEC1CRV2470T	CAP , ELEC (SMD)	47UF/16V	1	EA
TC26	HCEC1CRV2220T	CAP , ELEC (SMD)	22UF/16V	1	EA
TC27	HCEC1CRV2100T	CAP , ELEC (SMD)	10UF / 16V	1	EA
Semiconductors					
D001	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11	1	EA
D002	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11	1	EA
D004	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11	1	EA

Ref. Designator	Part Number	Description		Qty	
DVD LOADER (FRONT END) PCB					
D010	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11	1	EA
D011	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11	1	EA
D012	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11	1	EA
Q001	HVTKTA1664	TRANSISTOR , CHIP	KTA1664	1	EA
Q002	HVTKTA1664	TRANSISTOR , CHIP	KTA1664	1	EA
Q004	HVIRC7809RTM	REGULATOR, 9V (FAIRCHILD)	FAN7809RTM	1	EA
Q005	HVT2SK2731	TR, SWITCHING, (ROHM)	2SK2731 T146	1	EA
Q006	HVIRC1117S33	REGULATOR, 3.3V (FAIRDCHILD)	FAN1117AS-33X	1	EA
Q010	HVT2SK2731	TR, SWITCHING, (ROHM)	2SK2731 T146	1	EA
Q011	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q020	HVTKRC111S	TRANSISTOR , CHIP	KRC111S	1	EA
U001	HVIM5705	IC, SERVO/DECORDER (ALI)	M5705	1	EA
U002	HVISP3721A	IC,SP3721A (ALI)	SP3721A	1	EA
U003	HVIFAN8024BDTF	IC, MOTOR DRIVER (FAIRCHILD)	FAN8024BDTF	1	EA
U004	HVIBA4560F	IC, OPAMP (ROHM)	BA4560F-E2	1	EA
U006	HVIAT49F001N	IC , FLASH MEMORY (ATMEL)	ATMEL AT49F001N	1	EA
U007	HVINF0429N	IC, EDO RAM (TAIWAN MEMORY)	T224162B-35S	1	EA
U008	HVI74LCX244T	IC, BUS BUFFER (ST)	74LCX244TTR	1	EA
U009	HVIFAN8082DTF	IC, DRIVER (FAIRCHILD)	FAN8082DFT	1	EA
U010	HVIFAN8082DTF	IC, DRIVER (FAIRCHILD)	FAN8082DFT	1	EA
U020	HVIBD4743G	IC, RESET (ROHM)	BD4743G-TR	1	EA
ZD01	HVDUDZS4.3BSR	DIODE , ZENER (CHIP,4.3V)	1712 TYPE	1	EA
ZD02	HVDUDZS4.3BSR	DIODE , ZENER (CHIP,4.3V)	1712 TYPE	1	EA
Resistors					
RA01	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RA02	HRJ104DJ470T	RES , 1608 4 ARRAY	47 OHM/1608*4	1	EA
RA03	HRJ104DJ101T	RES, ARRAY, 100 OHM (PHILIPS)	ARC 241 100R	1	EA
RA04	HRJ104DJ101T	RES, ARRAY, 100 OHM (PHILIPS)	ARC 241 100R	1	EA
RA05	HRJ104DJ101T	RES, ARRAY, 100 OHM (PHILIPS)	ARC 241 100R	1	EA
RA06	HRJ104DJ101T	RES, ARRAY, 100 OHM (PHILIPS)	ARC 241 100R	1	EA
RA07	HRJ104DJ103T	RES, ARRAY, 10K (PHILIPS)	ARC 241 10K	1	EA
RA08	HRJ104DJ103T	RES, ARRAY, 10K (PHILIPS)	ARC 241 10K	1	EA
RA09	HRJ104DJ103T	RES, ARRAY, 10K (PHILIPS)	ARC 241 10K	1	EA
RA10	HRJ104DJ103T	RES, ARRAY, 10K (PHILIPS)	ARC 241 10K	1	EA
RA11	HRJ104DJ103T	RES, ARRAY, 10K (PHILIPS)	ARC 241 10K	1	EA
RN01	HRJ10DJ330T	RES , CHIP (1/10W) , 33 OHM J	1608 SIZE	1	EA
RN02	HRJ10DJ330T	RES , CHIP (1/10W) , 33 OHM J	1608 SIZE	1	EA
RN03	HRJ10DJ330T	RES , CHIP (1/10W) , 33 OHM J	1608 SIZE	1	EA
RN04	HRJ10DJ330T	RES , CHIP (1/10W) , 33 OHM J	1608 SIZE	1	EA
R001	HRJ10DJ203T	RES , CHIP , 1608 SIZE	20K OHM , 1/10W 5%	1	EA
R002	HRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R003	HRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R004	HRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R005	HRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R006	HRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R007	HRJ10DJ0R0T	RES , CHIP(1/10W)	0 OHM	1	EA
R008	HRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R010	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R011	HRJ10DJ513T	RES, 51K OHM, 1608 (PILIPS)	RES 0603 56K	1	EA
R012	HRJ10DJ222T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R013	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R014	HRJ10DJ472T	RES , CHIP (1/10W) ,4.7K OHM J	1608 SIZE	1	EA
R015	HRJ10DJ203T	RES , CHIP , 1608 SIZE	20K OHM , 1/10W 5%	1	EA
R016	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R017	HRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R018	HRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R019	HRJ10DJ472T	RES , CHIP (1/10W) ,4.7K OHM J	1608 SIZE	1	EA
R020	HRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R021	HRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R022	HRJ10DJ512T	RES , CHIP , 1608 SIZE	5.1K OHM , 1/10W 5%	1	EA
R023	HRJ10DJ563T	RES , CHIP , 1608 SIZE	56K OHM , 1/10W 5%	1	EA
R024	HRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R025	HRJ10AJ0R0T	RES, 0 OHM, 2012 (PHILIPS)	RC115%0R2012	1	EA
R026	HRJ10DJ100T	RES , CHIP (1/10W) , 10 OHM J	1608 SIZE	1	EA

Ref. Designator	Part Number	Description		Qty	
DVD LOADER (FRONT END) PCB					
R027	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R029	HRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R030	HRJ10DJ102T	RES , CHIP (1/10W) , 1K OHM J	1608 SIZE	1	EA
R031	HRJ10DJ102T	RES , CHIP (1/10W) , 1K OHM J	1608 SIZE	1	EA
R032	HRJ10DF822T	RES, 8.2K OHM, 1%,1608(PILIPS)	RC211%8K20603	1	EA
R033	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R034	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R035	HRJ10DJ0R0T	RES , CHIP(1/10W)	0 OHM	1	EA
R036	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R037	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R038	HRJ10DJ512T	RES , CHIP , 1608 SIZE	5.1K OHM , 1/10W 5%	1	EA
R039	HRJ10DJ512T	RES , CHIP , 1608 SIZE	5.1K OHM , 1/10W 5%	1	EA
R040	HRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R041	HRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R042	HRJ10DJ102T	RES , CHIP (1/10W) , 1K OHM J	1608 SIZE	1	EA
R044	HRJ10DJ330T	RES , CHIP (1/10W) , 33 OHM J	1608 SIZE	1	EA
R045	HRJ10AJ0R0T	RES, 0 OHM, 2012 (PHILIPS)	RC115%0R2012	1	EA
R046	HRJ10DF822T	RES, 8.2K OHM, 1%,1608(PILIPS)	RC211%8K20603	1	EA
R047	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R048	HRJ10DJ105T	RES , CHIP (1/10W)	1608 SIZE	1	EA
R049	HRJ10DJ100T	RES , CHIP (1/10W) , 10 OHM J	1608 SIZE	1	EA
R050	HRJ01HJ100T	RES, 10 OHM, 6432, 1W (ROHM)	MCR100 JZH J 10	1	EA
R053	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R054	HRJ01HJ100T	RES, 10 OHM, 6432, 1W (ROHM)	MCR100 JZH J 10	1	EA
R055	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R056	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R057	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R058	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R059	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R060	HRJ10DJ512T	RES , CHIP , 1608 SIZE	5.1K OHM , 1/10W 5%	1	EA
R061	HRJ10DJ333T	RES , CHIP , 1608 SIZE	33K OHM , 1/10W 5%	1	EA
R063	HRJ10DJ0R0T	RES , CHIP(1/10W)	0 OHM	1	EA
R065	HRJ10DJ0R0T	RES , CHIP(1/10W)	0 OHM	1	EA
R066	HRJ10DJ102T	RES , CHIP (1/10W) , 1K OHM J	1608 SIZE	1	EA
R067	HRJ10DJ0R0T	RES , CHIP(1/10W)	0 OHM	1	EA
R068	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R069	HRJ14CJ1R0T	RES, 1.5%, 3216 1/4W (PHILIPS)	RC215%1R1206	1	EA
R070	HRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R071	HRJ10DJ512T	RES , CHIP , 1608 SIZE	5.1K OHM , 1/10W 5%	1	EA
R072	HRJ10DJ221T	RES , CHIP (1/10W)	1608 SIZE	1	EA
R074	HRJ10DJ0R0T	RES , CHIP(1/10W)	0 OHM	1	EA
R075	HRJ14CJ1R0T	RES, 1.5%, 3216 1/4W (PHILIPS)	RC215%1R1206	1	EA
R076	HRJ14CJ1R0T	RES, 1.5%, 3216 1/4W (PHILIPS)	RC215%1R1206	1	EA
R077	HRJ14CJ1R0T	RES, 1.5%, 3216 1/4W (PHILIPS)	RC215%1R1206	1	EA
R078	HRJ10DJ222T	RES , CHIP , 1608 SIZE	2.2K OHM , 1/10W 5%	1	EA
R079	HRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R080	HRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R082	HRJ10DJ333T	RES , CHIP , 1608 SIZE	33K OHM , 1/10W 5%	1	EA
R083	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R084	HRJ10DJ330T	RES , CHIP (1/10W) , 33 OHM J	1608 SIZE	1	EA
R088	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R089	HRJ10DJ473T	RES , CHIP (1/10W) , 47K OHM J	1608SIZE	1	EA
R113	HRJ10DJ330T	RES , CHIP (1/10W) , 33 OHM J	1608 SIZE	1	EA
R117	HRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R121	HRJ10DJ330T	RES , CHIP (1/10W) , 33 OHM J	1608 SIZE	1	EA
R122	HRJ10DJ330T	RES , CHIP (1/10W) , 33 OHM J	1608 SIZE	1	EA
R138	HRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R139	HRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R140	HRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R149	HRJ10DJ330T	RES , CHIP (1/10W) , 33 OHM J	1608 SIZE	1	EA
R200	HRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R201	HRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R202	HRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R203	HRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R204	HRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA

Ref. Designator	Part Number	Description		Qty	
DVD LOADER (FRONT END) PCB					
Miscellaneous					
X001	BOX33868SC	XTAL, CERAMIC RESONATOR (TDK)	CCR33.86MXC7T	1	EA
J001	KJP07GB46ZM	WAFER		1	EA
CN01	KJP24GB150ZG	FFC CONNECTOR, 0.5MM, SMD TYPE	GF055-24S-LSS	1	EA
CN02	KJP16GB149ZY	FFC CONNECTOR 1MM, SMD TYPE	1008HR-16A00	1	EA
CN03	KJP04GA01ZM	WAFER	MOLEX 5267-04A	1	EA
L001	HLZ9R600E	IND, FB, 2012 , 1.5A	HCB2012K-601T20	1	EA
L002	HLQ08E3R9KRZ	IND , CHIP 2012 3.9UH		1	EA
L003	HLQ08E3R9KRZ	IND , CHIP 2012 3.9UH		1	EA
L005	HLZ9R600E	IND, FB, 2012 , 1.5A	HCB2012K-601T20	1	EA
L006	HLQ08E220KRZ	IND , CHIP 2012 3.9UH		1	EA
CN52	KJP324440RG	40P BOX HEADER	QDR-3500	1	EA
DVD MAIN PCB CUP11685Z					
Capacitors					
CF11	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
CF12	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
CF13	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
CF14	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
CF15	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
CF16	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
CF17	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
CF18	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
CF19	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
CF20	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
CF21	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
CF22	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
CF23	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
CF24	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
CF25	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C101	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C102	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C103	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C104	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C105	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C106	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C107	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C108	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C109	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C110	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C111	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C112	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C113	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C114	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C115	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C116	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C117	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C118	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C119	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C120	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C122	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C125	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C126	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C129	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C130	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C131	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C132	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C133	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C145	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C154	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C155	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C156	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA

Ref. Designator	Part Number	Description		Qty	
DVD MAIN PCB	**CUP11685Z**				
C157	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C158	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C159	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C160	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C161	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C162	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C163	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C164	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C165	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C166	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C168	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C169	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C170	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C172	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C173	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C174	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C179	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C180	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C181	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C182	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C183	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C187	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C188	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C194	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C195	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C198	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C200	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C201	HCUS1H271JA	CAP , CHIP , 1608 SIZE	270PF 50V J	1	EA
C202	HCUS1H271JA	CAP , CHIP , 1608 SIZE	270PF 50V J	1	EA
C203	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C205	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C207	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C208	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C210	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C212	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C223	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C226	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C232	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C233	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C234	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C235	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C236	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C237	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C238	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C242	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C243	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C244	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C245	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C246	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C247	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C248	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C249	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C121	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C123	HCEC0JRV2101T	CAP , CHIP ELECT	100UF/6.3V	1	EA
C124	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C127	HCEC1CRV2100T	CAP , ELEC (SMD)	10UF / 16V	1	EA
C128	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C136	HCEC0JRV2101T	CAP , CHIP ELECT	100UF/6.3V	1	EA
C137	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C140	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C141	HCUS1H270JA	CAP , CHIP , 27PF JA	1608 SIZE	1	EA
C142	HCUS1H270JA	CAP , CHIP , 27PF JA	1608 SIZE	1	EA
C143	HCEC0JRV2101T	CAP , CHIP ELECT	100UF/6.3V	1	EA
C144	HCEC0JRV2101T	CAP , CHIP ELECT	100UF/6.3V	1	EA
C146	HCEC0JRV2101T	CAP , CHIP ELECT	100UF/6.3V	1	EA
C147	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA

Ref. Designator	Part Number	Description		Qty	
DVD MAIN PCB	**CUP11685Z**				
C148	HCEC0JRV2101T	CAP , CHIP ELECT	100UF/6.3V	1	EA
C149	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C150	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C151	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C152	HCUS1H271JA	CAP , CHIP , 1608 SIZE	270PF 50V J	1	EA
C153	HCUS1H271JA	CAP , CHIP , 1608 SIZE	270PF 50V J	1	EA
C167	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C171	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C175	HCEC1CRV2220T	CAP , ELEC (SMD)	22UF/16V	1	EA
C176	HCEC0JRV2101T	CAP , CHIP ELECT	100UF/6.3V	1	EA
C177	HCEC1CRV2100T	CAP , ELEC (SMD)	10UF / 16V	1	EA
C178	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C189	HCEC1CRV2100T	CAP , ELEC (SMD)	10UF / 16V	1	EA
C190	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C191	HCEC1CRV2100T	CAP , ELEC (SMD)	10UF / 16V	1	EA
C192	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C193	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C196	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C197	HCEC1CRV2100T	CAP , ELEC (SMD)	10UF / 16V	1	EA
C199	HCEC1CRV2100T	CAP , ELEC (SMD)	10UF / 16V	1	EA
C204	HCEC1CRV2100T	CAP , ELEC (SMD)	10UF / 16V	1	EA
C206	HCEC1CRV2100T	CAP , ELEC (SMD)	10UF / 16V	1	EA
C209	HCEC1CRV2100T	CAP , ELEC (SMD)	10UF / 16V	1	EA
C211	HCEC1CRV2100T	CAP , ELEC (SMD)	10UF / 16V	1	EA
C213	HCEC1CRV2100T	CAP , ELEC (SMD)	10UF / 16V	1	EA
C217	HCEC0JRV2101T	CAP , CHIP ELECT	100UF/6.3V	1	EA
C218	HCEC0JRV2101T	CAP , CHIP ELECT	100UF/6.3V	1	EA
C219	HCEC0JRV2101T	CAP , CHIP ELECT	100UF/6.3V	1	EA
C220	HCEC0JRV2101T	CAP , CHIP ELECT	100UF/6.3V	1	EA
C221	HCEC0JRV2101T	CAP , CHIP ELECT	100UF/6.3V	1	EA
C222	HCEC0JRV2101T	CAP , CHIP ELECT	100UF/6.3V	1	EA
C224	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C225	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C227	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C228	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C239	HCEC1CRV2100T	CAP , ELEC (SMD)	10UF / 16V	1	EA
C240	HCEC1CRV2100T	CAP , ELEC (SMD)	10UF / 16V	1	EA
C241	HCEC1CRV2100T	CAP , ELEC (SMD)	10UF / 16V	1	EA
Semiconductors					
D102	HVDRB160L60TE25	DIODE , SCHOTTKEY BARRIER HK	RB160L-60TE25	1	EA
IC11	HVIES6038F	I.C , MPEG DECORDER	ESS6038	1	EA
IC12	HVIHY57V641620D	I.C , 64MSDRAM	HY57V641620D	1	EA
IC13	HVITC74HCU04AFN	I.C , INVERTER	TC74HCU04AFN	1	EA
IC14	HVI74LCX08MX	I.C , AND GATE(QUAD/2IN L/V)	74LCX08MX	1	EA
IC15	HVIBR24C16F	I.C , EEPROM(16K)	BR24C16F	1	EA
IC16	HVIMX29LV16ABT9	I,C , 16M FLASH MEMORY	MX29LV16ABT9	1	EA
IC21	HVISII504CM208	I.C , VIDEO PROCESSOR	SII504CM208	1	EA
IC22	HVIADV7196A	I.C , VIDEO ENCODER	ADV7196A	1	EA
IC23	HVICS4955	I.C , VIDEO ENCODER	CS4955	1	EA
IC24	HVI57V643220CT7	I.C , 64M SDRAM	HY57V643220CT-7	1	EA
IC25	HVINJM2586AMTE1	I.C , VIDEO SW	NJM2586AM	1	EA
Q101	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
RG11	HVILM1117S-3V3	I.C , REGULATOR (3.3V)	1117S-3.3V	1	EA
RG12	HVILM1117S-ADJ	I.C , REGULATOR (ADJ)	LM1117-ADJ	1	EA
RG13	HVILM1117S-3V3	I.C , REGULATOR (3.3V)	1117S-3.3V	1	EA
RG14	HVILM1117S-3V3	I.C , REGULATOR (3.3V)	1117S-3.3V	1	EA
RG15	HVILM1117S-1V8	I.C , REGULATOR (1.8V)	LM1117-1V8	1	EA
Resistors					
C231	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
C229	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
C230	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
RP11	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA

Ref. Designator	Part Number	Description		Qty	
DVD MAIN PCB	**CUP11685Z**				
RP13	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
RP15	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R124	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R125	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R135	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R143	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R159	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R165	CRJ10DJ682T	RES , CHIP , 1608 SIZE	6.8K OHM , 1/10W 5%	1	EA
R175	CRJ10DF68R1T	RESISITOR 68.1OHM(1%)		1	EA
R177	CRJ10DF68R1T	RESISITOR 68.1OHM(1%)		1	EA
R179	CRJ10DF82R5T	RESISTOR 82.5OHM(1%)		1	EA
R182	CRJ10DF68R1T	RESISITOR 68.1OHM(1%)		1	EA
R204	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R208	CRJ10DF5620T	1% RESISTOR 562OHM		1	EA
R209	CRJ10DF6810T	RES , CHIP 681 OHM/1608/1%		1	EA
R210	CRJ10DF5620T	1% RESISTOR 562OHM		1	EA
R211	CRJ10DF6810T	RES , CHIP 681 OHM/1608/1%		1	EA
R212	CRJ10DF5620T	1% RESISTOR 562OHM		1	EA
R213	CRJ10DF6810T	RES , CHIP 681 OHM/1608/1%		1	EA
R214	CRJ10DF82R5T	RESISTOR 82.5OHM(1%)		1	EA
R215	CRJ10DF82R5T	RESISTOR 82.5OHM(1%)		1	EA
R216	CRJ10DF82R5T	RESISTOR 82.5OHM(1%)		1	EA
R217	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R218	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R220	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R257	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
RN11	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN12	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN13	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN14	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN15	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN16	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN17	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN18	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN19	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN20	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN21	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN22	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN23	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN24	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN25	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN26	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN27	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN28	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN29	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN30	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN31	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN32	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN33	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN34	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN35	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN36	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN37	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN38	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN39	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN40	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN41	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN42	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN43	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN44	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN45	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN46	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN47	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN48	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN49	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
RN50	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA

Ref. Designator	Part Number	Description		Qty	
DVD MAIN PCB	**CUP11685Z**				
RN51	HRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4	1	EA
R101	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R102	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R103	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R104	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R105	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R106	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R107	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R108	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R109	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R110	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R111	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R112	CRJ10DJ102T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R116	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R117	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R118	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R119	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R120	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R121	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R122	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R123	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R126	CRJ10DJ473T	RES , CHIP , 1608 SIZE	47K OHM , 1/10W 5%	1	EA
R127	CRJ10DJ473T	RES , CHIP , 1608 SIZE	47K OHM , 1/10W 5%	1	EA
R128	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R129	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R130	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R131	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
R132	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R133	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R134	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R137	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
R139	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R140	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R141	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R142	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R144	CRJ10DJ121T	RES , CHIP , 1608 SIZE	120 OHM , 1/10W 5%	1	EA
R145	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R146	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R147	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R148	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R149	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R150	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R151	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R152	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R153	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R154	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R155	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R156	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R157	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R158	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R160	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R161	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R162	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R163	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
R164	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R166	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R167	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R168	CRJ10DJ152T	RES , CHIP , 1608 SIZE	1.5K OHM , 1/10W 5%	1	EA
R169	CRJ10DJ152T	RES , CHIP , 1608 SIZE	1.5K OHM , 1/10W 5%	1	EA
R170	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R171	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R172	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R173	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R174	HRJ10DF402T	RES , CHIP , 1608 SIZE	4K OHM , 1/10W 1%	1	EA
R176	CRJ10DF56R2T	RES. CHIP (56.2 OHM 1%)	1608 SIZE	1	EA
R178	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA

Ref. Designator	Part Number	Description		Qty	
DVD MAIN PCB	**CUP11685Z**				
R180	CRJ10DF82R5T	RESISTOR 82.5OHM(1%)		1	EA
R181	CRJ10DF68R1T	RESISITOR 68.1OHM(1%)		1	EA
R183	CRJ10DF68R1T	RESISITOR 68.1OHM(1%)		1	EA
R185	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R186	CRJ10DJ271T	RES , CHIP , 1608 SIZE	270 OHM , 1/10W 5%	1	EA
R187	CRJ10DJ331T	RES , CHIP , 1608 SIZE	330 OHM , 1/10W 5%	1	EA
R188	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R189	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R193	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R194	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R197	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R198	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R199	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R200	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R221	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R223	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
R224	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R226	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
R227	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R256	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
Miscellaneous					
BD10	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD11	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD20	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD21	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD12	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD13	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD14	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD15	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD16	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD18	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD19	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD22	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD23	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD24	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
CN10	KJP29GA117ZG	WAFER , C.CABLE	LG	1	EA
CN11	KJP3013DS40G	40P DIP SOCKET(STRAIGHT)	QDR-3500	1	EA
CN12	KJP16GA117ZG	WAFER , CARD CABLE (STRAIGH	GF102-16S-TS	1	EA
LF11	HLQ08E1R8KRZ	CHIP , COIL (1.8UH)	2012	1	EA
LF12	HLQ08E1R8KRZ	CHIP , COIL (1.8UH)	2012	1	EA
LF13	HLQ08E1R8KRZ	CHIP , COIL (1.8UH)	2012	1	EA
LF14	HLQ08E1R8KRZ	CHIP , COIL (1.8UH)	2012	1	EA
LF15	HLQ08E1R8KRZ	CHIP , COIL (1.8UH)	2012	1	EA
LF16	HLQ08E1R8KRZ	CHIP , COIL (1.8UH)	2012	1	EA
LF17	HLQ08E1R8KRZ	CHIP , COIL (1.8UH)	2012	1	EA
LF18	HLQ08E1R8KRZ	CHIP , COIL (1.8UH)	2012	1	EA
LF19	HLQ08E1R8KRZ	CHIP , COIL (1.8UH)	2012	1	EA
X102	HOX27000E180S	CRYSTAL , CHIP(27MHZ,SMD)	HC-49/US	1	EA
5CHANGER MECHANISM ASS'Y CJDMGX-F8002					
	BHG1A257	INSULATOR , RUBBER	E9D 4004-0	4	EA
	CHD2A047	SCREW , SPECIAL		4	EA
	CMD1A499	PLATE , CLAMP	QDR-3500(MECHA)	1	EA
	CMH1A211	CLAMP , TOP	QDR-3500(MECHA)	1	EA
	CMH1A212	CLAMP , BOTTOM	QDR-3500(MECHA)	1	EA
	CTB2+4G	SCREW		1	EA
	CTB26+6G	SCREW		3	EA
	CWB1B907080EE	WIRE ASS'Y		1	EA
	CWB1E904180BB	WIRE ASS'Y		1	EA
	CWC1B2A16A100B	CARD CABLE		1	EA
	CWC1B4A29A100B	CARD CABLE		1	EA
	CWC1G2A24G100A	CARD CABLE , 0.5MM		1	EA

Ref. Designator	Part Number	Description		Qty	
5CHANGER MECHANISM ASS'Y CJDMGX-F8002					
	HRL-CHE510	TRAVERSE UNIT ASS'Y	RL-CHE510	1	EA
	KJC1A006	MAGENT ND	QDR-3500(N-38)	1	EA
	CKF1A277Z	PANEL , REAR	CVR700	1	EA
	CKL2A069H43	FOOT		4	EA
	CMC1A221	PLATE , SHIELD	CVR700	1	EA
	CMD1A521	FRAME , AV3	CVR700	1	EA
	CMD1A553	BRACKET , FAN		1	EA
	CMX1A198	INSULATOR		1	EA
SENSOR PCB ASS'Y CUP11612Z					
	CUP11612Z	5 MECHANISM SENSOR PCB	QDR-3500	1	EA
	CWB1B002190JJ	SENSOR PCB WIRE ASS'Y	QDR-3500	1	EA
	HVDSIM22ST	INFRARED L.E.D	SIM-22ST	1	EA
DIGITAL PCB					
Capacitors					
CG01	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
CG03	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C317	HCUS1H821JA	CAP , CHIP , 1608 SIZE	820PF 50V J	1	EA
C318	HCUS1H821JA	CAP , CHIP , 1608 SIZE	820PF 50V J	1	EA
C319	HCUS1H821JA	CAP , CHIP , 1608 SIZE	820PF 50V J	1	EA
C320	HCUS1H821JA	CAP , CHIP , 1608 SIZE	820PF 50V J	1	EA
C321	HCUS1H821JA	CAP , CHIP , 1608 SIZE	820PF 50V J	1	EA
C322	HCUS1H821JA	CAP , CHIP , 1608 SIZE	820PF 50V J	1	EA
C323	HCUS1H821JA	CAP , CHIP , 1608 SIZE	820PF 50V J	1	EA
C324	HCUS1H821JA	CAP , CHIP , 1608 SIZE	820PF 50V J	1	EA
C333	HCUS1H821JA	CAP , CHIP , 1608 SIZE	820PF 50V J	1	EA
C334	HCUS1H821JA	CAP , CHIP , 1608 SIZE	820PF 50V J	1	EA
C335	HCUS1H821JA	CAP , CHIP , 1608 SIZE	820PF 50V J	1	EA
C336	HCUS1H821JA	CAP , CHIP , 1608 SIZE	820PF 50V J	1	EA
C337	HCUS1H821JA	CAP , CHIP , 1608 SIZE	820PF 50V J	1	EA
C338	HCUS1H821JA	CAP , CHIP , 1608 SIZE	820PF 50V J	1	EA
C339	HCUS1H821JA	CAP , CHIP , 1608 SIZE	820PF 50V J	1	EA
C340	HCUS1H821JA	CAP , CHIP , 1608 SIZE	820PF 50V J	1	EA
C341	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C342	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C343	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C344	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C345	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C346	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C357	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C358	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C359	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C360	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C361	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C362	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C363	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C364	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C365	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C366	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C367	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C368	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C369	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C370	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C371	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C372	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C382	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C384	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C385	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C386	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C388	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C390	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA

Ref. Designator	Part Number	Description		Qty	
DIGITAL PCB					
C392	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C394	HCUS1H122KC	CAP , CHIP , 1608 SIZE	0.0012UF 50V K	1	EA
C395	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C397	HCUS1C105ZF	CAP , CHIP , 1608 SIZE	1UF 16V Z	1	EA
C398	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C399	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C401	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C404	HCUS1H222KC	CAP , CHIP , 1608 SIZE	0.0022UF 50V K	1	EA
C419	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C420	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C422	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C423	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C432	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C440	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C444	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C445	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C446	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C447	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C448	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C449	HCUS1H330JA	CAP , CHIP , 1608 SIZE	33PF 50V J	1	EA
C450	HCUS1H330JA	CAP , CHIP , 1608 SIZE	33PF 50V J	1	EA
C451	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C452	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C453	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C454	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C455	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C456	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C457	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C458	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C459	HCUS1H473KC	CAP , CHIP , 1608 SIZE	0.047UF 50V Z	1	EA
C460	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C462	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C465	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C466	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C467	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C468	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C469	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C476	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C478	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C480	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C485	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C486	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C487	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C488	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C489	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C490	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C491	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C492	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C493	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C494	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C495	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C496	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C497	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C498	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C499	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C500	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C501	HCUS1H330JA	CAP , CHIP , 1608 SIZE	33PF 50V J	1	EA
C502	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C503	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C504	HCUS1H330JA	CAP , CHIP , 1608 SIZE	33PF 50V J	1	EA
C506	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C508	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C509	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C510	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
C514	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C516	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA

Ref. Designator	Part Number	Description		Qty	
DIGITAL PCB					
C517	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C518	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C523	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C524	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C525	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C528	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C529	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C531	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C532	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C533	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C535	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C537	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C538	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C540	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C541	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C542	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C543	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C544	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C546	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C547	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C548	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C549	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C557	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C558	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C559	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C560	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C561	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C562	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C564	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C573	HCUS1H391JA	CAP , CHIP , 1608 SIZE	390PF 50V J	1	EA
C574	HCUS1H391JA	CAP , CHIP , 1608 SIZE	390PF 50V J	1	EA
C577	HCUS1H561JA	CAP , CHIP , 1608 SIZE	560PF 50V J	1	EA
C578	HCUS1H561JA	CAP , CHIP , 1608 SIZE	560PF 50V J	1	EA
C581	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C582	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C583	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C584	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C586	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C587	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C588	HCUS1H680JA	CAP , CHIP , 1608 SIZE	68PF 50V J	1	EA
C590	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C592	HCUS1H330JA	CAP , CHIP , 1608 SIZE	33PF 50V J	1	EA
C593	HCUS1H330JA	CAP , CHIP , 1608 SIZE	33PF 50V J	1	EA
C301	HCQI1H472JZT	CAP , MYLAR	4700PF 50V J	1	EA
C302	HCQI1H472JZT	CAP , MYLAR	4700PF 50V J	1	EA
C303	HCQI1H472JZT	CAP , MYLAR	4700PF 50V J	1	EA
C304	HCQI1H472JZT	CAP , MYLAR	4700PF 50V J	1	EA
C305	HCQI1H472JZT	CAP , MYLAR	4700PF 50V J	1	EA
C306	HCQI1H472JZT	CAP , MYLAR	4700PF 50V J	1	EA
C307	HCQI1H472JZT	CAP , MYLAR	4700PF 50V J	1	EA
C308	HCQI1H472JZT	CAP , MYLAR	4700PF 50V J	1	EA
C309	HCQI1H472JZT	CAP , MYLAR	4700PF 50V J	1	EA
C310	HCQI1H472JZT	CAP , MYLAR	4700PF 50V J	1	EA
C311	HCQI1H472JZT	CAP , MYLAR	4700PF 50V J	1	EA
C312	HCQI1H472JZT	CAP , MYLAR	4700PF 50V J	1	EA
C313	HCQI1H472JZT	CAP , MYLAR	4700PF 50V J	1	EA
C314	HCQI1H472JZT	CAP , MYLAR	4700PF 50V J	1	EA
C315	HCQI1H104JZT	CAP , MYLAR	0.1UF 50V J	1	EA
C316	HCQI1H104JZT	CAP , MYLAR	0.1UF 50V J	1	EA
C349	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C350	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C351	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C352	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C353	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C354	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C355	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA

Ref. Designator	Part Number	Description		Qty	
DIGITAL PCB					
C356	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C381	CCEA1CH220T	CAP , ELECT	22UF 16V	1	EA
C383	CCEA1CH220T	CAP , ELECT	22UF 16V	1	EA
C387	CCEA1CH220T	CAP , ELECT	22UF 16V	1	EA
C389	CCEA1CH220T	CAP , ELECT	22UF 16V	1	EA
C391	CCEA1CH220T	CAP , ELECT	22UF 16V	1	EA
C393	CCEA1HH2R2T	CAP , ELECT	2.2UF 50V	1	EA
C396	CCEA1CH470T	CAP , ELECT	47UF 25V	1	EA
C400	CCEA1CH220T	CAP , ELECT	22UF 16V	1	EA
C402	HCQI1H272JZT	CAP , MYLAR	2700PF 50V J	1	EA
C403	HCQI1H272JZT	CAP , MYLAR	2700PF 50V J	1	EA
C461	CCEA0JH102T	CAP , ELECT	1000UF 6.3V	1	EA
C463	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C464	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C472	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C473	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C474	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C475	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C477	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C479	CCEA0JH102T	CAP , ELECT	1000UF 6.3V	1	EA
C481	CCEA1CH470T	CAP , ELECT	47UF 25V	1	EA
C482	CCEA1CH470T	CAP , ELECT	47UF 25V	1	EA
C483	CCEA1CH470T	CAP , ELECT	47UF 25V	1	EA
C484	CCEA1CH470T	CAP , ELECT	47UF 25V	1	EA
C505	CCEA1CH470T	CAP , ELECT	47UF 25V	1	EA
C507	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C551	CCEA0JH102T	CAP , ELECT	1000UF 6.3V	1	EA
C552	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C553	CCEA1AH101T	CAP , ELECT	100UF 10V	1	EA
C554	CCEA1AH101T	CAP , ELECT	100UF 10V	1	EA
C555	CCEA1CH471T	CAP , ELECT	470UF 16V	1	EA
C556	CCEA1CH471T	CAP , ELECT	470UF 16V	1	EA
C563	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C565	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C571	CCKT1H681KB	CAP , CERAMIC	680PF 50V KB	1	EA
C572	CCKT1H681KB	CAP , CERAMIC	680PF 50V KB	1	EA
C575	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C576	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C579	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C580	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
Semiconductors					
BD31	HVDRB160L60TE25	DIODE , SCHOTTKEY BARRIER HK	RB160L-60TE25	1	EA
IC31	HVICS49400-CQ	I.C , DECODER	CS49400-CQ	1	EA
IC32	HVICS42528-CQ	I.C , CODEC + DIR	CS42528-CQ	1	EA
IC33	HVIMX29LV400TTC	I.C , 4M FLASH MEMORY	MX29LV400TTC-70	1	EA
IC34	HVISN74HC151PWR	IC , DATA SELECTOR	CVR700	1	EA
IC35	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1	1	EA
IC36	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1	1	EA
IC37	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1	1	EA
IC38	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1	1	EA
IC39	HVITC74HCU04AFN	IC , INVERTER	TC74HCU04AFN	1	EA
IC40	HVITC74HCU04AFN	IC , INVERTER	TC74HCU04AFN	1	EA
IC41	HVITC74HCU04AFN	IC , INVERTER	TC74HCU04AFN	1	EA
IC42	HVITC74HCU04AFN	IC , INVERTER	TC74HCU04AFN	1	EA
IC43	HVITC74VHCT08FT	IC , AND-GATE	TC74VHCT08FT	1	EA
IC44	HVI74LCX08MX	I.C , AND GATE(QUAD/2IN L/V)	74LCX08MX	1	EA
IC45	HVI74LVC32APWR	I.C , OR GATE	SN74LVC32APWR	1	EA
IC47	HVI74LVC157ADBR	I.C , MULTIPLEXER	SN74LVC157A	1	EA
IC48	HVITA48033FTE16	I.C , REGULATOR	TA48033FTE16	1	EA
IC49	HVITA48025FTE16	I.C , REGULATOR	TA48025FTE16	1	EA
IC51	HVIPCM1754DBQR	I.C , 2CH DAC	PCM1754DBQR	1	EA
IC52	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1	1	EA
IC54	HVI57V161610ET7	SDRAM 16M 7NS	HY57V161610ET-7	1	EA

Ref. Designator	Part Number	Description		Qty	
DIGITAL PCB					
Resistors					
L306	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
RG01	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
RG02	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
RG03	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
RN31	HRJ104DJ101T	RES, ARRAY, 100 OHM (PHILIPS)	ARC 241 100R	1	EA
RN32	HRJ104DJ101T	RES, ARRAY, 100 OHM (PHILIPS)	ARC 241 100R	1	EA
RN33	HRJ104DJ331T	RES , 4ARRAY (1608*4)	33O OHM/1608*4	1	EA
RN34	HRJ104DJ101T	RES, ARRAY, 100 OHM (PHILIPS)	ARC 241 100R	1	EA
RN35	HRJ104DJ101T	RES, ARRAY, 100 OHM (PHILIPS)	ARC 241 100R	1	EA
RN36	HRJ104DJ101T	RES, ARRAY, 100 OHM (PHILIPS)	ARC 241 100R	1	EA
RN37	HRJ104DJ331T	RES , 4ARRAY (1608*4)	33O OHM/1608*4	1	EA
RN38	HRJ104DJ101T	RES, ARRAY, 100 OHM (PHILIPS)	ARC 241 100R	1	EA
RN39	HRJ104DJ101T	RES, ARRAY, 100 OHM (PHILIPS)	ARC 241 100R	1	EA
R301	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R302	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R303	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R304	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R305	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R306	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R307	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R308	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R309	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R310	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R311	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R312	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R313	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R314	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R315	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R316	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R317	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R318	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R319	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R320	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R321	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R322	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R323	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R324	CRJ10DJ822T	RES , CHIP , 1608 SIZE	8.2K OHM , 1/10W 5%	1	EA
R325	CRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R326	CRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R327	CRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R328	CRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R329	CRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R330	CRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R331	CRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R332	CRJ10DJ182T	RES , CHIP , 1608 SIZE	1.8K OHM , 1/10W 5%	1	EA
R333	CRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R334	CRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R335	CRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R336	CRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R337	CRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R338	CRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R339	CRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R340	CRJ10DJ182T	RES , CHIP , 1608 SIZE	1.8K OHM , 1/10W 5%	1	EA
R341	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R342	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R343	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R344	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R345	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R346	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R347	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R348	CRJ10DJ822T	RES , CHIP , 1608 SIZE	8.2K OHM , 1/10W 5%	1	EA
R349	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R350	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R351	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA

Ref. Designator	Part Number	Description		Qty	
DIGITAL PCB					
R352	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R353	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R354	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R355	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R356	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R357	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R358	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R359	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R360	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R361	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R362	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R363	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R364	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R365	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R366	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R367	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R368	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R369	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R370	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R371	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R372	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R381	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R382	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R383	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R384	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R386	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R387	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R388	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R389	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R390	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R391	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R392	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R393	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R394	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R395	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R396	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R397	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R398	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R399	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R400	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R411	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R412	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R413	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R414	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R415	CRJ10DJ1R0T	RES , CHIP , 1608 SIZE	1 OHM , 1/10W 5%	1	EA
R416	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R417	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R418	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R419	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R420	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R421	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R422	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R423	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R424	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R425	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R426	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R428	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R429	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R430	CRJ10DJ152T	RES , CHIP , 1608 SIZE	1.5K OHM , 1/10W 5%	1	EA
R431	CRJ10DJ152T	RES , CHIP , 1608 SIZE	1.5K OHM , 1/10W 5%	1	EA
R432	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R433	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R434	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R437	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R438	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R439	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA

Ref. Designator	Part Number	Description		Qty	
DIGITAL PCB					
R441	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R442	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R443	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R444	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R445	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R446	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R447	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R448	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R449	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R450	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R451	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R452	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R453	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R454	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R455	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R456	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R457	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R458	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R459	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R460	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R461	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R462	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R463	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R464	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R465	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R466	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R467	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R468	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R469	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R470	CRJ10DJ470T	RES , CHIP , 1608 SIZE	47 OHM , 1/10W 5%	1	EA
R471	CRJ10DJ470T	RES , CHIP , 1608 SIZE	47 OHM , 1/10W 5%	1	EA
R472	CRJ10DJ470T	RES , CHIP , 1608 SIZE	47 OHM , 1/10W 5%	1	EA
R473	CRJ10DJ470T	RES , CHIP , 1608 SIZE	47 OHM , 1/10W 5%	1	EA
R474	CRJ10DJ470T	RES , CHIP , 1608 SIZE	47 OHM , 1/10W 5%	1	EA
R475	CRJ10DJ470T	RES , CHIP , 1608 SIZE	47 OHM , 1/10W 5%	1	EA
R476	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R477	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R478	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R479	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R480	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R481	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R483	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R485	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R487	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R489	CRJ10DJ750T	RES , CHIP , 1608 SIZE	75 OHM , 1/10W 5%	1	EA
R490	CRJ10DJ750T	RES , CHIP , 1608 SIZE	75 OHM , 1/10W 5%	1	EA
R491	CRJ10DJ750T	RES , CHIP , 1608 SIZE	75 OHM , 1/10W 5%	1	EA
R492	CRJ10DJ750T	RES , CHIP , 1608 SIZE	75 OHM , 1/10W 5%	1	EA
R493	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R494	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R495	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R496	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R497	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R498	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R499	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R500	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R501	CRJ10DJ220T	RES , CHIP , 1608 SIZE	22 OHM , 1/10W 5%	1	EA
R502	CRJ10DJ750T	RES , CHIP , 1608 SIZE	75 OHM , 1/10W 5%	1	EA
R503	CRJ10DJ221T	RES , CHIP , 1608 SIZE	220 OHM , 1/10W 5%	1	EA
R504	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R505	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R506	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R507	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R508	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R509	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R510	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA

Ref. Designator	Part Number	Description		Qty	
DIGITAL PCB					
R511	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R512	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R513	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R514	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R515	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R516	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R517	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R518	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R519	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R520	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R521	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R522	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R523	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R524	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R525	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R526	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R527	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R528	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R529	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R530	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R531	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R532	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R533	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R534	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R535	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R536	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R537	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R538	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R540	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R541	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R542	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R543	CRJ10DJ470T	RES , CHIP , 1608 SIZE	47 OHM , 1/10W 5%	1	EA
R544	CRJ10DJ470T	RES , CHIP , 1608 SIZE	47 OHM , 1/10W 5%	1	EA
R546	CRJ10DJ470T	RES , CHIP , 1608 SIZE	47 OHM , 1/10W 5%	1	EA
R547	CRJ10DJ470T	RES , CHIP , 1608 SIZE	47 OHM , 1/10W 5%	1	EA
R548	CRJ10DJ470T	RES , CHIP , 1608 SIZE	47 OHM , 1/10W 5%	1	EA
R549	CRJ10DJ470T	RES , CHIP , 1608 SIZE	47 OHM , 1/10W 5%	1	EA
R550	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R551	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R569	CRJ10DJ473T	RES , CHIP , 1608 SIZE	47K OHM , 1/10W 5%	1	EA
R570	CRJ10DJ473T	RES , CHIP , 1608 SIZE	47K OHM , 1/10W 5%	1	EA
R571	CRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R572	CRJ10DJ122T	RES , CHIP , 1608 SIZE	1.2K OHM , 1/10W 5%	1	EA
R573	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R574	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R575	CRJ10DJ272T	RES , CHIP , 1608 SIZE	2.7K OHM , 1/10W 5%	1	EA
R576	CRJ10DJ272T	RES , CHIP , 1608 SIZE	2.7K OHM , 1/10W 5%	1	EA
R577	CRJ10DJ822T	RES , CHIP , 1608 SIZE	8.2K OHM , 1/10W 5%	1	EA
R578	CRJ10DJ822T	RES , CHIP , 1608 SIZE	8.2K OHM , 1/10W 5%	1	EA
R579	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R580	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R581	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R582	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R583	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R584	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R585	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R587	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R589	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R590	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R591	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R592	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R595	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R596	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA

Ref. Designator	Part Number	Description		Qty	
DIGITAL PCB					
Miscellaneous					
BD32	HLZ9Z014Z	CHIP , BEAD	HU-1H4516-600JT	1	EA
BD33	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD34	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
L301	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
L302	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
L303	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
L304	HLZ9M011Z	COIL , CHIP(22UH,K)	LEMC3225TYPE	1	EA
L305	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BK41	CMD1A387	BRACKET , PCB		1	EA
BN31	KJP10GB99ZM	WAFER	MOLEX35237-1010	1	EA
BN32	KJP15GB99ZM	WAFER	MOLEX35237-1510	1	EA
CN31	KJP25GA117ZG	WAFER, CARD CABLE	GF102-25S-TS	1	EA
CN32	KJP29GA117ZG	WAFER, CARD CABLE	GF102-29S-TS	1	EA
CN33	KJP25GA117ZG	WAFER, CARD CABLE	GF102-25S-TS	1	EA
CN34	KJP07GA19ZM	WAFER	MOLEX53014-0710	1	EA
CN35	KJP02GA01ZM	WAFER	MOLEX 5267-02A	1	EA
CN71	KJP08GA01ZM	WAFER	MOLEX 5267-08A	1	EA
CN72	KJP06GA01ZM	WAFER	MOLEX 5267-06A	1	EA
CN95	CJP06GA170ZW	WAFER	A2502WV2(06)	1	EA
CN96	CJP08GA170ZW	WAFER	A2502WV2(08)	1	EA
JK31	HJSTORX179L	MODULE , OPTICAL(RX)	TORX179L	1	EA
JK32	HJSTORX179L	MODULE , OPTICAL(RX)	TORX179L	1	EA
JK33	HJSTORX179L	MODULE , OPTICAL(RX)	TORX179L	1	EA
JK34	HJSTORX179L	MODULE , OPTICAL(RX)	TORX179L	1	EA
JK35	CJJ4P046Z	JACK RCA (ORANGE)	RCA-401DA(II)-25	1	EA
JK36	CJJ4M044Y	JACK, BOARD	SILVER PLATE	1	EA
JK37	HJSTOTX179L	MODULE , OPTICAL(TX)	TOTX179L	1	EA
JW35	CWE7202050AA	WIRE ASS'Y		1	EA
X301	HOX12288E320C	CRYSTAL	12.288MHZ	1	EA
INPUT PCB CUP11632Z					
Capacitors					
C111	HCUS1E334ZF	CAP , CHIP , 1608 SIZE	0.33UF 25V Z	1	EA
C112	HCUS1E334ZF	CAP , CHIP , 1608 SIZE	0.33UF 25V Z	1	EA
C113	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C114	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C115	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C116	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C117	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C118	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C119	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C120	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C121	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C122	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C123	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C124	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C131	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C132	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C133	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C134	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C135	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C136	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C137	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C138	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C143	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C144	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C145	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C147	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C148	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C150	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C154	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C159	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA

Ref. Designator	Part Number	Description		Qty	
INPUT PCB CUP11632Z					
C160	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C161	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C162	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C166	HCUS1H471JA	CAP , CHIP , 1608 SIZE	470PF 50V J	1	EA
C167	HCUS1H471JA	CAP , CHIP , 1608 SIZE	470PF 50V J	1	EA
C168	HCUS1H471JA	CAP , CHIP , 1608 SIZE	470PF 50V J	1	EA
C175	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C176	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C180	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C182	HCUS1H471JA	CAP , CHIP , 1608 SIZE	470PF 50V J	1	EA
C183	HCUS1H471JA	CAP , CHIP , 1608 SIZE	470PF 50V J	1	EA
C184	HCUS1H471JA	CAP , CHIP , 1608 SIZE	470PF 50V J	1	EA
C207	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C211	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C213	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C215	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C217	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C218	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C219	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C220	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C221	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C222	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C228	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C230	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C232	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C236	HCUS1H150JA	CAP , CHIP , 1608 SIZE	15PF 50V J	1	EA
C237	HCUS1H150JA	CAP , CHIP , 1608 SIZE	15PF 50V J	1	EA
C241	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C249	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C254	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C255	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C256	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C257	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C261	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C262	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C263	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C264	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C269	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C270	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C271	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C298	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C299	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C129	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C130	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C139	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C140	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C151	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C152	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C153	CCEA1AH101T	CAP , ELECT	100UF 10V	1	EA
C157	CCEA1CH221T	CAP , ELECT	220UF 16V	1	EA
C158	CCEA1CH221T	CAP , ELECT	220UF 16V	1	EA
C163	CCEA1CH221T	CAP , ELECT	220UF 16V	1	EA
C164	CCEA1CH221T	CAP , ELECT	220UF 16V	1	EA
C202	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C210	CCEA1EH470T	CAP , ELECT	47UF 25V	1	EA
C212	CCEA1CH471T	CAP , ELECT	470UF 16V	1	EA
C224	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C225	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C226	CCEA1HH2R2T	CAP , ELECT	2.2UF 50V	1	EA
C231	CCEA1CH471T	CAP , ELECT	470UF 16V	1	EA
C233	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C234	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C238	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C239	CCEA1HH1R0T	CAP , ELECT	1UF 50V	1	EA
C240	CCEA1AH101T	CAP , ELECT	100UF 10V	1	EA
C243	CCEA1EH101T	CAP , ELECT	100UF 25V	1	EA

Ref. Designator	Part Number	Description		Qty	
INPUT PCB CUP11632Z					
C248	CCEA1HH2R2T	CAP , ELECT	2.2UF 50V	1	EA
C251	CCEA1EH220T	CAP , ELECT	22UF/25V	1	EA
C252	CCEA1CH221T	CAP , ELECT	220UF 16V	1	EA
C253	CCEA1CH221T	CAP , ELECT	220UF 16V	1	EA
C259	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
Semiconductors					
D202	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D203	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D204	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D205	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D206	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D207	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D208	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D209	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D210	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D211	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D231	HVDUDZS6.8BSR	DIODE , ZENER (CHIP,6.8V)	1712 TYPE	1	EA
D232	HVDUDZS3.3BSR	DIODE , ZENER (CHIP,3.3V)	1712 TYPE	1	EA
D233	HVDUDZS4.7BSR	DIODE , ZENER (CHIP,4.7V)	1712 TYPE	1	EA
D591	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
IC11	HVITC9164AF	I.C , FUNCTION	TC9164AF	1	EA
IC12	HVITC9162AF	I.C , FUNCTION	TC9162AF	1	EA
IC13	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1	1	EA
IC14	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1	1	EA
IC15	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1	1	EA
IC16	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1	1	EA
IC21	HVIST92F124V1T6	I.C , MCU (FLASH 128K,TQFP100)	ST92F124V1T6	1	EA
IC22	HVITC74VHCT08FT	IC , AND-GATE	TC74VHCT08FT	1	EA
IC24	HVIRH5VT18C	I.C , RESET	RICOH 1.8V	1	EA
Q101	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q102	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q175	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q176	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q229	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q232	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q233	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q240	HVTKTA1504SYRTK	TRANSISTOR , CHIP	KTA1504S Y RTK	1	EA
Q241	HVTKTC3875SYRTK	TRANSISTOR , CHIP	KTC3875S Y RTK	1	EA
Q243	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q244	HVTKRC114S	TRANSISTOR , CHIP	KRC114S	1	EA
Q245	HVTKRA102S	TRANSISTOR , CHIP	KRA102S	1	EA
Q248	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q251	HVTKRA102S	TRANSISTOR , CHIP	KRA102S	1	EA
Q252	HVTKRA102S	TRANSISTOR , CHIP	KRA102S	1	EA
Q253	HVTKRC114S	TRANSISTOR , CHIP	KRC114S	1	EA
Q254	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q228	HVTKSA916YT	TRANSISTOR	KSA916Y	1	EA
Q231	HVTKSC2316YT	TRANSISTOR	KSC2316Y	1	EA
IC23	BVIKP1010B	IC, PHOTO COUPLER	KP1010B	1	EA
Resistors					
ROT3	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
ROT4	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
R101	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R102	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R103	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R104	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R105	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R106	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R107	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R108	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R109	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R110	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA

Ref. Designator	Part Number	Description		Qty	
INPUT PCB CUP11632Z					
R111	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R112	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R113	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R114	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R115	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R116	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R117	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R118	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R119	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R120	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R121	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R122	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R123	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R124	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R125	CRJ10DJ331T	RES , CHIP , 1608 SIZE	330 OHM , 1/10W 5%	1	EA
R126	CRJ10DJ331T	RES , CHIP , 1608 SIZE	330 OHM , 1/10W 5%	1	EA
R127	CRJ10DJ563T	RES , CHIP (1608)	56K	1	EA
R128	CRJ10DJ563T	RES , CHIP (1608)	56K	1	EA
R129	CRJ10DJ683T	RES , CHIP , 1608 SIZE	68K OHM , 1/10W 5%	1	EA
R130	CRJ10DJ683T	RES , CHIP , 1608 SIZE	68K OHM , 1/10W 5%	1	EA
R131	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R132	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R133	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R134	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R135	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R136	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R137	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R138	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R139	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R140	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R141	CRJ10DJ331T	RES , CHIP , 1608 SIZE	330 OHM , 1/10W 5%	1	EA
R142	CRJ10DJ331T	RES , CHIP , 1608 SIZE	330 OHM , 1/10W 5%	1	EA
R143	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R144	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R145	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R146	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R147	CRJ10DJ683T	RES , CHIP , 1608 SIZE	68K OHM , 1/10W 5%	1	EA
R148	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R149	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R150	CRJ10DJ683T	RES , CHIP , 1608 SIZE	68K OHM , 1/10W 5%	1	EA
R151	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R152	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R153	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R154	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R155	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R156	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R157	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R158	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R159	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R160	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R161	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R162	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R166	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R167	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R168	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R171	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R172	CRJ10DJ104T	RES , CHIP , 1608 SIZE	100K OHM , 1/10W 5%	1	EA
R173	CRJ10DJ683T	RES , CHIP , 1608 SIZE	68K OHM , 1/10W 5%	1	EA
R174	CRJ10DJ683T	RES , CHIP , 1608 SIZE	68K OHM , 1/10W 5%	1	EA
R175	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R176	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R177	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R178	CRJ10DJ224T	RES , CHIP , 1608 SIZE	220K OHM , 1/10W 5%	1	EA
R179	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R180	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R181	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA

Ref. Designator	Part Number	Description		Qty	
INPUT PCB CUP11632Z					
R182	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R183	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R184	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R185	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R186	CRJ10DJ562T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R201	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R202	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R203	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R204	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R205	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R206	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R207	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R208	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R209	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R210	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R211	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R212	CRJ14CJ4R7T	RES , CHIP , 3216 SIZE	4.7 OHM , 1/4W 5%	1	EA
R213	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R214	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R215	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R216	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R217	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R218	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R219	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R220	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R221	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R222	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R223	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R226	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R228	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R229	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R230	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R231	CRJ14CJ4R7T	RES , CHIP , 3216 SIZE	4.7 OHM , 1/4W 5%	1	EA
R232	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R233	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R234	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R235	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R236	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
R237	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R238	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R239	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R240	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R241	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R242	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R243	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R245	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R247	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
R248	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R249	CRJ10DJ473T	RES , CHIP , 1608 SIZE	47K OHM , 1/10W 5%	1	EA
R251	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R252	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R253	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R254	CRJ10DJ271T	RES , CHIP , 1608 SIZE	270 OHM , 1/10W 5%	1	EA
R255	CRJ10DJ470T	RES , CHIP , 1608 SIZE	47 OHM , 1/10W 5%	1	EA
R256	CRJ10DJ473T	RES , CHIP , 1608 SIZE	47K OHM , 1/10W 5%	1	EA
R257	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R258	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R259	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R261	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R262	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R263	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R264	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R265	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R266	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R267	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA
R268	CRJ10DJ330T	RES , CHIP , 1608 SIZE	30 OHM , 1/10W 5%	1	EA

Ref. Designator	Part Number	Description		Qty	
INPUT PCB CUP11632Z					
R269	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R270	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R271	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R273	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R274	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R298	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
BD22	CRJ10DJ0R0T	RES , CHIP	0 OHM , 1/10W 5%	1	EA
BD23	CRJ10DJ0R0T	RES , CHIP	0 OHM , 1/10W 5%	1	EA
Miscellaneous					
BD21	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD55	HLZ9Z014Z	CHIP , BEAD	HU-1H4516-600JT	1	EA
S201	HST1A016Z	SW , TACT	SKQNAED010	1	EA
BN21	KJP15GB99ZM	WAFER	MOLEX35237-1510	1	EA
BN22	KJP12GB99ZM	WAFER	MOLEX35237-1210	1	EA
BN25	CWZCVR700BN25	SHIELD WIRE ASS'Y		1	EA
BN26	CWB2B007350EN	WIRE ASS'Y		1	EA
CN11	KJP25GA117ZG	WAFER, CARD CABLE	GF102-25S-TS	1	EA
CN12	KJP17GA117ZG	WAFER , CARD CABLE	GF102-17S-TS	1	EA
CN13	KJP08GA19ZM	WAFER	MOLEX53014-0810	1	EA
CN14	KJP02GA01ZM	WAFER	MOLEX 5267-02A	1	EA
CN21	KJP21GA117ZG	WAFER , CARD CABLE (21P 1M/	GF102-21S-TS	1	EA
CN22	CJP26GA147ZW	26 DUAL WAFER	JWT	1	EA
CN23	KJP25GA117ZG	WAFER, CARD CABLE	GF102-25S-TS	1	EA
CN24	KJP13GA115ZG	WAFER, CARD CABLE	GF120-13S-TS	1	EA
CN27	KJP02GA68ZG	WAFER		1	EA
JK11	CJJ4P014Y	JACK , IN/OUT		1	EA
JK12	CJJ4R019Z	JACK , IN/OUT		1	EA
JK13	CJJ4P014Y	JACK , IN/OUT		1	EA
JK21	HJJ1D002Z	JACK, HOSIDEN	SR7400	1	EA
JW11	CWZCVR700JW11	WIRE ASS'Y		1	EA
X201	HOX04000E150C	CRYSTAL , 4MHZ	4MHZ	1	EA
VIDEO PCB					
Capacitors					
C701	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C702	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C703	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C704	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C705	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C706	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C707	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C708	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C709	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C710	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C713	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C714	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C715	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C721	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C722	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C725	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C726	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C743	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C744	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C745	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C746	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C747	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C748	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C749	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C750	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C758	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C773	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C775	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA

Ref. Designator	Part Number	Description		Qty	
VIDEO PCB					
C777	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C780	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C781	HCUS1H102KC	CAP , CHIP , 1608 SIZE	0.001UF 50V K	1	EA
C783	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C784	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C814	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C815	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C816	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C817	HCUS1H220JA	CAP , CHIP , 1608 SIZE	22PF 50V J	1	EA
C818	HCUS1H220JA	CAP , CHIP , 1608 SIZE	22PF 50V J	1	EA
C819	HCUS1H220JA	CAP , CHIP , 1608 SIZE	22PF 50V J	1	EA
C820	HCUS1H150JA	CAP , CHIP , 1608 SIZE	15PF 50V J	1	EA
C821	HCUS1H150JA	CAP , CHIP , 1608 SIZE	15PF 50V J	1	EA
C822	HCUS1H220JA	CAP , CHIP , 1608 SIZE	22PF 50V J	1	EA
C823	HCUS1H220JA	CAP , CHIP , 1608 SIZE	22PF 50V J	1	EA
C824	HCUS1H220JA	CAP , CHIP , 1608 SIZE	22PF 50V J	1	EA
C825	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C833	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C834	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C835	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C836	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C837	HCUS1H220JA	CAP , CHIP , 1608 SIZE	22PF 50V J	1	EA
C838	HCUS1H150JA	CAP , CHIP , 1608 SIZE	15PF 50V J	1	EA
C839	HCUS1H150JA	CAP , CHIP , 1608 SIZE	15PF 50V J	1	EA
C840	HCUS1H220JA	CAP , CHIP , 1608 SIZE	22PF 50V J	1	EA
C841	HCUS1H220JA	CAP , CHIP , 1608 SIZE	22PF 50V J	1	EA
C842	HCUS1H220JA	CAP , CHIP , 1608 SIZE	22PF 50V J	1	EA
C843	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C845	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C846	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C847	HCUS1H471JA	CAP , CHIP , 1608 SIZE	470PF 50V J	1	EA
C848	HCUS1H471JA	CAP , CHIP , 1608 SIZE	470PF 50V J	1	EA
C849	HCUS1H471JA	CAP , CHIP , 1608 SIZE	470PF 50V J	1	EA
C854	HCUS1H150JA	CAP , CHIP , 1608 SIZE	15PF 50V J	1	EA
C855	HCUS1H150JA	CAP , CHIP , 1608 SIZE	15PF 50V J	1	EA
C856	HCUS1H150JA	CAP , CHIP , 1608 SIZE	15PF 50V J	1	EA
C875	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C876	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C877	HCUS1H101JA	CAP , CHIP , 1608 SIZE	100PF 50V J	1	EA
C890	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C891	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C892	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C902	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
C903	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
C904	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
C914	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
C915	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
C916	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
C928	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C932	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C933	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C936	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C937	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C940	HCUS1H1R8JA	CAP,CHIP	1.8PF/1608	1	EA
C941	HCUS1H1R8JA	CAP,CHIP	1.8PF/1608	1	EA
C942	HCUS1H1R8JA	CAP,CHIP	1.8PF/1608	1	EA
C943	HCUS1H1R8JA	CAP,CHIP	1.8PF/1608	1	EA
C944	HCUS1H1R8JA	CAP,CHIP	1.8PF/1608	1	EA
C945	HCUS1H1R8JA	CAP,CHIP	1.8PF/1608	1	EA
C946	HCUS1H150JA	CAP , CHIP , 1608 SIZE	15PF 50V J	1	EA
C947	HCUS1H150JA	CAP , CHIP , 1608 SIZE	15PF 50V J	1	EA
C948	HCUS1H150JA	CAP , CHIP , 1608 SIZE	15PF 50V J	1	EA
C998	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C999	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C711	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C712	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA

Ref. Designator	Part Number	Description		Qty	
VIDEO PCB					
C716	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C717	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C718	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C872	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C873	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C874	HCUS1H103KC	CAP , CHIP , 1608 SIZE	0.01UF 50V K	1	EA
C929	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C976	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C719	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C720	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C723	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C724	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C727	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C728	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C731	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C732	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C733	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C734	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C735	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C736	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C737	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C738	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C739	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C740	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C741	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C751	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C752	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C753	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C755	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C759	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C760	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C761	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C762	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C763	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C764	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C776	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C788	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C806	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C807	CCEA1HH1R0T	CAP , ELECT	1UF 50V	1	EA
C808	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C809	CCEA1HH1R0T	CAP , ELECT	1UF 50V	1	EA
C810	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C811	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C812	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C813	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C826	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C827	CCEA1HH1R0T	CAP , ELECT	1UF 50V	1	EA
C828	CCEA1HH1R0T	CAP , ELECT	1UF 50V	1	EA
C829	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C830	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C831	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C832	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C844	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C857	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C866	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C867	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C868	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C887	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C888	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C889	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C909	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C910	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C917	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C918	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C919	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C922	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA

Ref. Designator	Part Number	Description		Qty	
VIDEO PCB					
C923	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C924	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C925	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C926	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C927	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C930	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C931	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C934	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C935	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C938	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C951	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C952	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C953	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C954	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C955	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C956	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C957	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C970	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C971	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C973	CCEA1CH471T	CAP , ELECT	470UF 16V	1	EA
C974	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C975	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
Semiconductors					
D703	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D951	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D952	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D953	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D973	HVDUDZS3.3BSR	DIODE , ZENER (CHIP,3.3V)	1712 TYPE	1	EA
D974	HVDUDZS4.7BSR	DIODE , ZENER (CHIP,4.7V)	1712 TYPE	1	EA
D975	HVDUDZS6.8BSR	DIODE , ZENER (CHIP,6.8V)	1712 TYPE	1	EA
IC71	HVINJM2296M	I.C , VIDEO SW	NJM2296M	1	EA
IC72	HVINJM2296M	I.C , VIDEO SW	NJM2296M	1	EA
IC73	HVINJM2296M	I.C , VIDEO SW	NJM2296M	1	EA
IC74	HVIHCF4053M013T	I.C , SWITCH	HCF4053B	1	EA
IC75	HVINJM2244MTE1	I.C , VIDEO SWITCH	QRW-6500	1	EA
IC76	HVINJM2244MTE1	I.C , VIDEO SWITCH	QRW-6500	1	EA
IC78	HVINJM2244MTE1	I.C , VIDEO SWITCH	QRW-6500	1	EA
IC80	HVILC74781M9017	I.C , OSD	LC74781M9017	1	EA
IC81	HVILC74781M9017	I.C , OSD	LC74781M9017	1	EA
IC82	HVINJU3718G	I.C , EXPANDER	NJU3718G	1	EA
IC86	HVIAD8002AR	IC,OP AMP(VIDEO)	AD8002A	1	EA
IC87	HVIAD8002AR	IC,OP AMP(VIDEO)	AD8002A	1	EA
IC88	HVIAD8002AR	IC,OP AMP(VIDEO)	AD8002A	1	EA
Q703	HVTKTA1504SYRTK	TRANSISTOR , CHIP	KTA1504S Y RTK	1	EA
Q705	HVTKTA1504SYRTK	TRANSISTOR , CHIP	KTA1504S Y RTK	1	EA
Q706	HVTKTA1504SYRTK	TRANSISTOR , CHIP	KTA1504S Y RTK	1	EA
Q707	HVTKTA1504SYRTK	TRANSISTOR , CHIP	KTA1504S Y RTK	1	EA
Q708	HVTKTA1504SYRTK	TRANSISTOR , CHIP	KTA1504S Y RTK	1	EA
Q709	HVTKTA1504SYRTK	TRANSISTOR , CHIP	KTA1504S Y RTK	1	EA
Q711	HVTKTC3875SYRTK	TRANSISTOR , CHIP	KTC3875S Y RTK	1	EA
Q712	HVTKTC3875SYRTK	TRANSISTOR , CHIP	KTC3875S Y RTK	1	EA
Q713	HVTKTC3875SYRTK	TRANSISTOR , CHIP	KTC3875S Y RTK	1	EA
Q714	HVTKTC3875SYRTK	TRANSISTOR , CHIP	KTC3875S Y RTK	1	EA
Q715	HVTKTC3875SYRTK	TRANSISTOR , CHIP	KTC3875S Y RTK	1	EA
Q716	HVTKTC3875SYRTK	TRANSISTOR , CHIP	KTC3875S Y RTK	1	EA
Q719	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q722	HVTKTA1504SYRTK	TRANSISTOR , CHIP	KTA1504S Y RTK	1	EA
Q726	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q951	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q952	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q953	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q971	HVTKRA102S	TRANSISTOR , CHIP	KRA102S	1	EA
Q972	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q975	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA

Ref. Designator	Part Number	Description		Qty	
VIDEO PCB					
Q976	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q973	HVTKSC2316YT	TRANSISTOR	KSC2316Y	1	EA
Resistors					
LF11	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
LF12	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
LF13	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
LF14	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
LF15	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
LF16	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
R701	CRJ10DF68R1T	RESISITOR 68.1OHM(1%)		1	EA
R702	CRJ10DF68R1T	RESISITOR 68.1OHM(1%)		1	EA
R703	CRJ10DF68R1T	RESISITOR 68.1OHM(1%)		1	EA
R704	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R705	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R706	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R707	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R708	CRJ10DF82R5T	RESISTOR 82.5OHM(1%)		1	EA
R709	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R710	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R713	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R714	CRJ10DF82R5T	RESISTOR 82.5OHM(1%)		1	EA
R715	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R717	CRJ10DF82R5T	RESISTOR 82.5OHM(1%)		1	EA
R719	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R720	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R721	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R722	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R723	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R724	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R725	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R726	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R727	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R728	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R729	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R730	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R731	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R732	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R733	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R734	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R735	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R736	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R737	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R738	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R739	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R740	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R741	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R742	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R743	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R744	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R745	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R746	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R747	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R748	CRJ10DJ560T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R749	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R750	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R751	CRJ10DJ222T	RES , CHIP , 1608 SIZE	2.2K OHM , 1/10W 5%	1	EA
R752	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R753	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R755	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R756	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R757	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R758	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R760	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R772	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA

Ref. Designator	Part Number	Description		Qty	
VIDEO PCB					
R773	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R774	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R775	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R776	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R777	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R778	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R779	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R780	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R781	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R782	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R783	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R784	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R785	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R787	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R788	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R796	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R797	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R802	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R804	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R806	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R807	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R808	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R809	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R810	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R811	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R812	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R813	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R814	CRJ10DJ560T	RES , CHIP , 1608 SIZE	5.6K OHM , 1/10W 5%	1	EA
R815	CRJ10DJ222T	RES , CHIP , 1608 SIZE	2.2K OHM , 1/10W 5%	1	EA
R816	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R817	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R818	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R819	CRJ10DJ1R0T	RES , CHIP , 1608 SIZE	1 OHM , 1/10W 5%	1	EA
R820	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R821	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R822	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R823	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R824	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R827	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R828	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R830	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R832	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R833	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R835	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R836	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
R837	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R838	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R839	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R840	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R841	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R845	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R846	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R847	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R848	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R849	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R854	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R855	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R856	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R857	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R858	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R859	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R860	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R861	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R862	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R863	CRJ10DF6810T	RES , CHIP 681 OHM/1608/1%		1	EA
R864	CRJ10DF6810T	RES , CHIP 681 OHM/1608/1%		1	EA

Ref. Designator	Part Number	Description		Qty	
VIDEO PCB					
R865	CRJ10DF6810T	RES , CHIP 681 OHM/1608/1%		1	EA
R866	CRJ10DF6810T	RES , CHIP 681 OHM/1608/1%		1	EA
R867	CRJ10DF6810T	RES , CHIP 681 OHM/1608/1%		1	EA
R868	CRJ10DF6810T	RES , CHIP 681 OHM/1608/1%		1	EA
R869	CRJ10DF6810T	RES , CHIP 681 OHM/1608/1%		1	EA
R870	CRJ10DF6810T	RES , CHIP 681 OHM/1608/1%		1	EA
R871	CRJ10DF6810T	RES , CHIP 681 OHM/1608/1%		1	EA
R872	CRJ10DF6810T	RES , CHIP 681 OHM/1608/1%		1	EA
R873	CRJ10DF6810T	RES , CHIP 681 OHM/1608/1%		1	EA
R874	CRJ10DF6810T	RES , CHIP 681 OHM/1608/1%		1	EA
R875	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R876	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R877	CRJ10DF68R1T	RESISITOR 68.1OHM(1%)		1	EA
R878	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R879	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R880	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R909	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R910	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R911	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R912	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R913	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R925	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R926	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R927	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R930	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R931	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R934	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R935	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R938	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R946	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R947	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R948	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R951	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R952	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R960	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R961	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R962	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R963	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R964	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R965	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R966	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R967	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R968	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R971	CRJ10DJ221T	RES , CHIP , 1608 SIZE	220 OHM , 1/10W 5%	1	EA
R973	CRJ14CJ4R7T	RES , CHIP , 3216 SIZE	4.7 OHM , 1/4W 5%	1	EA
R974	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R998	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R999	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R711	CRJ10DF82R5T	RESISTOR 82.5OHM(1%)		1	EA
R712	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R716	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R718	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R826	CRJ10DF75R0T	RES , CHIP 1% 75 OHM	75 OHM, 1%	1	EA
R975	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R976	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
Miscellaneous					
BD82	HLZ9Z014Z	CHIP , BEAD	HU-1H4516-600JT	1	EA
BD83	HLZ9Z014Z	CHIP , BEAD	HU-1H4516-600JT	1	EA
BD84	HLZ9Z014Z	CHIP , BEAD	HU-1H4516-600JT	1	EA
BD85	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD86	HLZ9J003Z	BEAD , FERRITE(CHIP) HK	BLM21A121SPT	1	EA
BD99	HLZ9Z014Z	CHIP , BEAD	HU-1H4516-600JT	1	EA
BN71	CWZCVR700BN71	SHIELD WIRE ASS'Y		1	EA
BN72	CWZCVR700BN72A	SHIELD WIRE ASS'Y		1	EA

Ref. Designator	Part Number	Description		Qty	
VIDEO PCB					
	HWEUL1691-SXCU	WIRE ASS'Y		0.5	M
BN74	CWB2B015280EN	WIRE ASS'Y		1	EA
BN75	CWB1C002400BM	WIRE ASS'Y		1	EA
BN79	CWZCVR700BN79	SHIELD WIRE ASS'Y		1	EA
BN80	CWZCVR700BN80	SHIELD WIRE ASS'Y		1	EA
CN12	KJP06GA98ZM	WAFER	MOLEX35336-0610	1	EA
CN13	KJP04GA01ZM	WAFER	MOLEX 5267-04A	1	EA
CN31	KJP10GA98ZM	WAFER	MOLEX35336-1010	1	EA
CN32	KJP15GA98ZM	WAFER	MOLEX35336-1510	1	EA
CN73	KJP15GA98ZM	WAFER	MOLEX35336-1510	1	EA
CN75	KJP12GA98ZM	WAFER	MOLEX35336-1210	1	EA
JK70	CJJ9N004Z	JACK,(S-VIDEO+VHS)		1	EA
JK71	CJJ9N004Z	JACK,(S-VIDEO+VHS)		1	EA
JK72	CJJ9N004Z	JACK,(S-VIDEO+VHS)		1	EA
JK73	CJJ9N004Z	JACK,(S-VIDEO+VHS)		1	EA
JK74	CJJ9N004Z	JACK,(S-VIDEO+VHS)		1	EA
JK75	CJJ9N004Z	JACK,(S-VIDEO+VHS)		1	EA
JK76	CJJ9N004Z	JACK,(S-VIDEO+VHS)		1	EA
JK77	CJJ4L007Z	JACK 9P (GGG/BBB/RRR)	RCA-902AA-16	1	EA
JK78	CJJ4M053Z	JCAK , RCA 1P	RCA-107C	1	EA
L801	HLQ02C330JT	COIL , AXIAL	33UH J	1	EA
L802	HLQ02C330JT	COIL , AXIAL	33UH J	1	EA
RY91	HSL4C008ZE	RELAY , TYCO	3-1462033-4	1	EA
RY92	HSL4C008ZE	RELAY , TYCO	3-1462033-4	1	EA
RY93	HSL4C008ZE	RELAY , TYCO	3-1462033-4	1	EA
RY94	HSL4C008ZE	RELAY , TYCO	3-1462033-4	1	EA
RY95	HSL4C008ZE	RELAY , TYCO	3-1462033-4	1	EA
RY96	HSL4C008ZE	RELAY , TYCO	3-1462033-4	1	EA
X701	HOX14318D220F	CRYSTAL	14.318MHZ	1	EA
AMP PCB					
Capacitors					
C503	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C504	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C507	HCUS1H561JA	CAP , CHIP , 1608 SIZE	560PF 50V J	1	EA
C508	HCUS1H561JA	CAP , CHIP , 1608 SIZE	560PF 50V J	1	EA
C509	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C510	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C511	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C525	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C526	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C528	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C529	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C530	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C539	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C540	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C547	HCUS1H271JA	CAP , CHIP , 1608 SIZE	270PF 50V J	1	EA
C548	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C551	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C555	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C556	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C557	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C559	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C560	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C563	CCUP2A104KB	CAP , CHIP	0.1UF / 100V	1	EA
C564	CCUP2A104KB	CAP , CHIP	0.1UF / 100V	1	EA
C565	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C566	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C569	HCUS1H473ZF	CAP , CHIP , 1608 SIZE	0.047UF 50V Z	1	EA
C570	HCUS1H473ZF	CAP , CHIP , 1608 SIZE	0.047UF 50V Z	1	EA
C575	HCUS1H472KC	CAP , CHIP , 1608 SIZE	0.0047UF 50V K	1	EA
C576	HCUS1H472KC	CAP , CHIP , 1608 SIZE	0.0047UF 50V K	1	EA
C577	HCUS1H472KC	CAP , CHIP , 1608 SIZE	0.0047UF 50V K	1	EA
C578	HCUS1H472KC	CAP , CHIP , 1608 SIZE	0.0047UF 50V K	1	EA

Ref. Designator	Part Number	Description		Qty	
AMP PCB					
C585	HCUS1H561JA	CAP , CHIP , 1608 SIZE	560PF 50V J	1	EA
C586	HCUS1H561JA	CAP , CHIP , 1608 SIZE	560PF 50V J	1	EA
C587	HCUS1H561JA	CAP , CHIP , 1608 SIZE	560PF 50V J	1	EA
C604	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C608	HCUS1H561JA	CAP , CHIP , 1608 SIZE	560PF 50V J	1	EA
C609	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C610	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C611	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C625	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C626	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C628	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C629	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C630	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C639	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C640	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C647	HCUS1H271JA	CAP , CHIP , 1608 SIZE	270PF 50V J	1	EA
C648	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C651	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C655	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C656	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C657	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C659	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C660	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C664	CCUP2A104KB	CAP , CHIP	0.1UF / 100V	1	EA
C665	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C666	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C669	HCUS1H473ZF	CAP , CHIP , 1608 SIZE	0.047UF 50V Z	1	EA
C670	HCUS1H473ZF	CAP , CHIP , 1608 SIZE	0.047UF 50V Z	1	EA
C676	HCUS1H472KC	CAP , CHIP , 1608 SIZE	0.0047UF 50V K	1	EA
C678	HCUS1H472KC	CAP , CHIP , 1608 SIZE	0.0047UF 50V K	1	EA
C679	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C683	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C684	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C689	HCUS1H102KC	CAP , CHIP , 1608 SIZE	0.001UF 50V K	1	EA
C690	HCUS1H102KC	CAP , CHIP , 1608 SIZE	0.001UF 50V K	1	EA
C691	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C692	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C693	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C698	HCUS1H102KC	CAP , CHIP , 1608 SIZE	0.001UF 50V K	1	EA
C703	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C704	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C707	HCUS1H561JA	CAP , CHIP , 1608 SIZE	560PF 50V J	1	EA
C708	HCUS1H561JA	CAP , CHIP , 1608 SIZE	560PF 50V J	1	EA
C709	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C710	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C711	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C725	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C726	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C728	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C729	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C730	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C739	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C740	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C747	HCUS1H271JA	CAP , CHIP , 1608 SIZE	270PF 50V J	1	EA
C748	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C751	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C755	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C756	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C757	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C759	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C760	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C763	CCUP2A104KB	CAP , CHIP	0.1UF / 100V	1	EA
C764	CCUP2A104KB	CAP , CHIP	0.1UF / 100V	1	EA
C765	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C766	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C769	HCUS1H473ZF	CAP , CHIP , 1608 SIZE	0.047UF 50V Z	1	EA

Ref. Designator	Part Number	Description		Qty	
AMP PCB					
C770	HCUS1H473ZF	CAP , CHIP , 1608 SIZE	0.047UF 50V Z	1	EA
C775	HCUS1H472KC	CAP , CHIP , 1608 SIZE	0.0047UF 50V K	1	EA
C776	HCUS1H472KC	CAP , CHIP , 1608 SIZE	0.0047UF 50V K	1	EA
C777	HCUS1H472KC	CAP , CHIP , 1608 SIZE	0.0047UF 50V K	1	EA
C778	HCUS1H472KC	CAP , CHIP , 1608 SIZE	0.0047UF 50V K	1	EA
C787	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C788	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C791	HCUS1H561JA	CAP , CHIP , 1608 SIZE	560PF 50V J	1	EA
C792	HCUS1H561JA	CAP , CHIP , 1608 SIZE	560PF 50V J	1	EA
C798	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C799	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C803	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C804	HCUS1H470JA	CAP , CHIP , 1608 SIZE	47PF 50V J	1	EA
C807	HCUS1H561JA	CAP , CHIP , 1608 SIZE	560PF 50V J	1	EA
C808	HCUS1H561JA	CAP , CHIP , 1608 SIZE	560PF 50V J	1	EA
C809	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C810	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C812	HCUS1H223KC	CAP , CHIP , 1608 SIZE	0.022UF 50V K	1	EA
C825	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C826	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C828	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C829	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C830	HCUS1H473ZF	CAP , CHIP , 1608 SIZE	0.047UF 50V Z	1	EA
C839	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C840	HCUS1H221JA	CAP , CHIP , 1608 SIZE	220PF 50V J	1	EA
C847	HCUS1H271JA	CAP , CHIP , 1608 SIZE	270PF 50V J	1	EA
C848	HCUS1H151JA	CAP , CHIP , 150PF JA	1608 SIZE	1	EA
C851	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C855	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C856	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C857	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C859	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C860	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C863	CCUP2A104KB	CAP , CHIP	0.1UF / 100V	1	EA
C864	CCUP2A104KB	CAP , CHIP	0.1UF / 100V	1	EA
C865	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C866	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C869	HCUS1H473ZF	CAP , CHIP , 1608 SIZE	0.047UF 50V Z	1	EA
C870	HCUS1H473ZF	CAP , CHIP , 1608 SIZE	0.047UF 50V Z	1	EA
C875	HCUS1H472KC	CAP , CHIP , 1608 SIZE	0.0047UF 50V K	1	EA
C876	HCUS1H472KC	CAP , CHIP , 1608 SIZE	0.0047UF 50V K	1	EA
C877	HCUS1H472KC	CAP , CHIP , 1608 SIZE	0.0047UF 50V K	1	EA
C878	HCUS1H472KC	CAP , CHIP , 1608 SIZE	0.0047UF 50V K	1	EA
C879	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C883	HCUS1H561JA	CAP , CHIP , 1608 SIZE	560PF 50V J	1	EA
C884	HCUS1H561JA	CAP , CHIP , 1608 SIZE	560PF 50V J	1	EA
C886	HCSHC1H1R0B	CHIP,TANTAL,1UF/50V	6032 TYPE	1	EA
C887	HCSHC1H1R0B	CHIP,TANTAL,1UF/50V	6032 TYPE	1	EA
C888	HCSHC1H1R0B	CHIP,TANTAL,1UF/50V	6032 TYPE	1	EA
C889	HCSHC1H1R0B	CHIP,TANTAL,1UF/50V	6032 TYPE	1	EA
C890	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C895	HCUS1E104ZF	CAP , CHIP , 0.1UF ZF	1608 SIZE	1	EA
C501	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C502	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C505	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C506	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C517	CCEA1HH2R2T	CAP , ELECT	2.2UF 50V	1	EA
C521	CCEA1HH4R7T	CAP , ELECT	4.7UF 50V	1	EA
C522	CCEA1HH4R7T	CAP , ELECT	4.7UF 50V	1	EA
C573	CCME2A154JXT	CAP , METALLIZED FILM	100V / 0.15UF	1	EA
C574	CCME2A154JXT	CAP , METALLIZED FILM	100V / 0.15UF	1	EA
C580	CCEA1CH221T	CAP , ELECT	220UF 16V	1	EA
C581	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C582	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C583	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C584	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA

Ref. Designator	Part Number	Description		Qty	
AMP PCB					
C589	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C590	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C591	HCQI1H822JZT	CAP , MYLAR	8200PF 50V J	1	EA
C592	HCQI1H822JZT	CAP , MYLAR	8200PF 50V J	1	EA
C593	CCEA1HHR68T	CAP , ELECT	0.68UF 50V	1	EA
C594	CCEA1HHR68T	CAP , ELECT	0.68UF 50V	1	EA
C595	KCFE1J224JBT	CAP , FILM(POLYESTER)	0.22UF 63V J	1	EA
C596	KCFE1J224JBT	CAP , FILM(POLYESTER)	0.22UF 63V J	1	EA
C599	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C600	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C602	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C606	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C615	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C616	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C619	CCEA1CH221T	CAP , ELECT	220UF 16V	1	EA
C622	CCEA1HH4R7T	CAP , ELECT	4.7UF 50V	1	EA
C627	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C653	CCEA1EH470TS	CAP , ELECT	25V/47UF/105'C	1	EA
C654	CCEA1EH470TS	CAP , ELECT	25V/47UF/105'C	1	EA
C658	CCEA1EH101T	CAP , ELECT	100UF 25V	1	EA
C662	HCEA2AH330TS	CAP , ELECT	33UF 100V	1	EA
C671	CCME2A154JXT	CAP , METALLIZED FILM	100V / 0.15UF	1	EA
C672	CCME2A154JXT	CAP , METALLIZED FILM	100V / 0.15UF	1	EA
C674	CCME2A154JXT	CAP , METALLIZED FILM	100V / 0.15UF	1	EA
C681	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C682	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C687	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C688	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C701	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C702	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C705	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C706	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C721	CCEA1HH4R7T	CAP , ELECT	4.7UF 50V	1	EA
C722	CCEA1HH4R7T	CAP , ELECT	4.7UF 50V	1	EA
C727	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C753	CCEA1EH470TS	CAP , ELECT	25V/47UF/105'C	1	EA
C754	CCEA1EH470TS	CAP , ELECT	25V/47UF/105'C	1	EA
C758	CCEA1EH101T	CAP , ELECT	100UF 25V	1	EA
C761	HCEA2AH330TS	CAP , ELECT	33UF 100V	1	EA
C762	HCEA2AH330TS	CAP , ELECT	33UF 100V	1	EA
C771	CCME2A154JXT	CAP , METALLIZED FILM	100V / 0.15UF	1	EA
C772	CCME2A154JXT	CAP , METALLIZED FILM	100V / 0.15UF	1	EA
C773	CCME2A154JXT	CAP , METALLIZED FILM	100V / 0.15UF	1	EA
C774	CCME2A154JXT	CAP , METALLIZED FILM	100V / 0.15UF	1	EA
C780	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C781	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C782	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C789	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C790	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C793	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C794	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C801	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C802	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C805	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C806	CCEA1VH100T	CAP , ELECT	10UF 35V	1	EA
C821	CCEA1HH4R7T	CAP , ELECT	4.7UF 50V	1	EA
C822	CCEA1HH4R7T	CAP , ELECT	4.7UF 50V	1	EA
C827	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C853	CCEA1EH470TS	CAP , ELECT	25V/47UF/105'C	1	EA
C854	CCEA1EH470TS	CAP , ELECT	25V/47UF/105'C	1	EA
C858	CCEA1EH101T	CAP , ELECT	100UF 25V	1	EA
C861	HCEA2AH330TS	CAP , ELECT	33UF 100V	1	EA
C862	HCEA2AH330TS	CAP , ELECT	33UF 100V	1	EA
C871	CCME2A154JXT	CAP , METALLIZED FILM	100V / 0.15UF	1	EA
C872	CCME2A154JXT	CAP , METALLIZED FILM	100V / 0.15UF	1	EA
C873	CCME2A154JXT	CAP , METALLIZED FILM	100V / 0.15UF	1	EA

Ref. Designator	Part Number	Description		Qty	
AMP PCB					
C874	CCME2A154JXT	CAP , METALLIZED FILM	100V / 0.15UF	1	EA
C881	CCEA1CKS100T	CAP , ELECT	10UF 16V	1	EA
C882	CCEA1CKS100T	CAP , ELECT	10UF 16V	1	EA
C885	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C898	CCEA1AH471T	CAP , ELECT	470UF 10V	1	EA
C987	CCEA1CH101T	CAP , ELECT	100UF 16V	1	EA
C567	HCEA1HH471E	CAP , ELECT	470UF 50V	1	EA
C568	HCEA1HH471E	CAP , ELECT	470UF 50V	1	EA
C667	HCEA1HH471E	CAP , ELECT	470UF 50V	1	EA
C668	HCEA1HH471E	CAP , ELECT	470UF 50V	1	EA
C767	HCEA1HH471E	CAP , ELECT	470UF 50V	1	EA
C768	HCEA1HH471E	CAP , ELECT	470UF 50V	1	EA
C867	HCEA1HH471E	CAP , ELECT	470UF 50V	1	EA
C868	HCEA1HH471E	CAP , ELECT	470UF 50V	1	EA
Semiconductors					
D521	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D555	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D556	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D557	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D561	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D562	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D563	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D564	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D565	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D566	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D579	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D581	HVDUDZS7.5BSR	DIODE , ZENER (CHIP,7.5V)	1712 TYPE	1	EA
D582	HVDUDZS7.5BSR	DIODE , ZENER (CHIP,7.5V)	1712 TYPE	1	EA
D583	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D611	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D612	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D615	HVDUDZS6.8BSR	DIODE , ZENER (CHIP,6.8V)	1712 TYPE	1	EA
D616	HVDRB160L60TE25	DIODE , SCHOTTKEY BARRIER HK	RB160L-60TE25	1	EA
D617	HVDRB160L60TE25	DIODE , SCHOTTKEY BARRIER HK	RB160L-60TE25	1	EA
D618	HVDRB160L60TE25	DIODE , SCHOTTKEY BARRIER HK	RB160L-60TE25	1	EA
D619	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D621	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D655	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D656	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D657	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D662	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D664	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D666	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D721	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D755	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D756	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D757	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D761	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D762	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D763	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D764	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D765	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D766	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D779	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D811	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D813	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D821	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D855	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D856	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D857	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D861	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D862	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D863	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D864	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA

Ref. Designator	Part Number	Description		Qty	
AMP PCB					
D865	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D866	HVD1SR159-200	DIODE , SCHOTTKEY BARRIER	1A , 200V	1	EA
D894	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D897	HVD1SS355T	DIODE , CHIP	1SS355(0.1A , 80V)	1	EA
D899	HVDUDZS5.6BSR	DIODE , ZENER (CHIP,5.6V)	1712 TYPE	1	EA
IC51	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1	1	EA
IC52	HVITC2001	I.C , PWM	TC2001	1	EA
IC58	HVIM62446AFP	I.C , VOLUME	M62446AFP	1	EA
IC61	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1	1	EA
IC62	HVITC2001	I.C , PWM	TC2001	1	EA
IC68	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1	1	EA
IC71	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1	1	EA
IC72	HVITC2001	I.C , PWM	TC2001	1	EA
IC81	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1	1	EA
IC82	HVITC2001	I.C , PWM	TC2001	1	EA
IC88	HVIM62429FP	I.C , VOLUME 2CH	M62429FP	1	EA
Q511	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q512	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q513	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q514	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q515	HVTKRA102S	TRANSISTOR , CHIP	KRA102S	1	EA
Q516	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q557	HVTFQD5P10D	F.E.T (D-PAK)	FQD5P10RTM	1	EA
Q578	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q612	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q613	HVTKRA102S	TRANSISTOR , CHIP	KRA102S	1	EA
Q614	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q616	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q630	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q657	HVTFQD5P10D	F.E.T (D-PAK)	FQD5P10RTM	1	EA
Q693	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q694	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q700	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q711	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q712	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q730	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q757	HVTFQD5P10D	F.E.T (D-PAK)	FQD5P10RTM	1	EA
Q778	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q795	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q796	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q811	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q812	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q819	HVTKRA102S	TRANSISTOR , CHIP	KRA102S	1	EA
Q857	HVTFQD5P10D	F.E.T (D-PAK)	FQD5P10RTM	1	EA
Q888	HVTKRC102S	TRANSISTOR , CHIP	KRC102S	1	EA
Q895	HVTKTD1304T	TRANSISTOR , CHIP (MUTE)	KTD1304	1	EA
Q897	HVTKRC114S	TRANSISTOR , CHIP	KRC114S	1	EA
Q898	HVTKRC114S	TRANSISTOR , CHIP	KRC114S	1	EA
Q899	HVTKRA102S	TRANSISTOR , CHIP	KRA102S	1	EA
Q577	HVTKRA102MT	TRANSISTOR	KRA102M	1	EA
Q615	HVTKSC2316YT	TRANSISTOR	KSC2316Y	1	EA
Q779	HVTKRA102MT	TRANSISTOR	KRA102M	1	EA
Q561	HVTFQPF13N10	F.E.T (TO-220F)	FQPF13N10TU	1	EA
Q562	HVTFQPF13N10	F.E.T (TO-220F)	FQPF13N10TU	1	EA
Q563	HVTFQPF13N10	F.E.T (TO-220F)	FQPF13N10TU	1	EA
Q564	HVTFQPF13N10	F.E.T (TO-220F)	FQPF13N10TU	1	EA
Q662	HVTFQPF13N10	F.E.T (TO-220F)	FQPF13N10TU	1	EA
Q664	HVTFQPF13N10	F.E.T (TO-220F)	FQPF13N10TU	1	EA
Q761	HVTFQPF13N10	F.E.T (TO-220F)	FQPF13N10TU	1	EA
Q762	HVTFQPF13N10	F.E.T (TO-220F)	FQPF13N10TU	1	EA
Q763	HVTFQPF13N10	F.E.T (TO-220F)	FQPF13N10TU	1	EA
Q764	HVTFQPF13N10	F.E.T (TO-220F)	FQPF13N10TU	1	EA
Q861	HVTFQPF13N10	F.E.T (TO-220F)	FQPF13N10TU	1	EA
Q862	HVTFQPF13N10	F.E.T (TO-220F)	FQPF13N10TU	1	EA
Q863	HVTFQPF13N10	F.E.T (TO-220F)	FQPF13N10TU	1	EA
Q864	HVTFQPF13N10	F.E.T (TO-220F)	FQPF13N10TU	1	EA

Ref. Designator	Part Number	Description		Qty	
AMP PCB					
IC53	HVITP2150	I.C , DIGITAL AMP	TP2150	1	EA
IC63	HVITP2150	I.C , DIGITAL AMP	TP2150	1	EA
IC73	HVITP2150	I.C , DIGITAL AMP	TP2150	1	EA
IC78	HVINJM4556AL	I.C , HEADPHONE	NJM4556AL	1	EA
IC83	HVITP2150	I.C , DIGITAL AMP	TP2150	1	EA
Resistors					
R501	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R502	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R503	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R504	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R505	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R506	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R507	CRJ10DJ333T	RES , CHIP , 1608 SIZE	33K OHM , 1/10W 5%	1	EA
R508	CRJ10DJ333T	RES , CHIP , 1608 SIZE	33K OHM , 1/10W 5%	1	EA
R509	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R510	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R511	CRJ10DJ682T	RES , CHIP , 1608 SIZE	6.8K OHM , 1/10W 5%	1	EA
R512	CRJ10DJ682T	RES , CHIP , 1608 SIZE	6.8K OHM , 1/10W 5%	1	EA
R513	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R514	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R517	CRJ10DJ334T	RES , CHIP , 1608 SIZE	330K OHM , 1/10W 5%	1	EA
R521	CRJ10DJ273T	RES , CHIP , 1608 SIZE	27K OHM , 1/10W 5%	1	EA
R522	CRJ10DJ273T	RES , CHIP , 1608 SIZE	27K OHM , 1/10W 5%	1	EA
R523	CRJ10DJ303T	RES , CHIP , 1608 SIZE	30K OHM , 1/10W 5%	1	EA
R524	CRJ10DJ303T	RES , CHIP , 1608 SIZE	30K OHM , 1/10W 5%	1	EA
R525	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R526	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R527	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R528	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R529	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R530	CRJ10DF8201T	RES , CHIP (8.2K/1%)		1	EA
R531	CRJ10DF3003T	RES , CHIP (300K/1%)		1	EA
R532	CRJ10DF8203T	RES , CHIP (820K/1%)		1	EA
R533	CRJ10DF3003T	RES , CHIP (300K/1%)		1	EA
R534	CRJ10DF2703T	RES , CHIP (270K/1%)		1	EA
R539	CRJ10DF1302T	RES , CHIP (13K/1%)		1	EA
R540	CRJ10DF1302T	RES , CHIP (13K/1%)		1	EA
R541	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R542	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R543	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R544	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R545	CRJ10DJ112T	RES , CHIP , 1608 SIZE	1.1K OHM , 1/10W 5%	1	EA
R546	CRJ10DJ112T	RES , CHIP , 1608 SIZE	1.1K OHM , 1/10W 5%	1	EA
R547	CRJ10DJ112T	RES , CHIP , 1608 SIZE	1.1K OHM , 1/10W 5%	1	EA
R548	CRJ10DJ112T	RES , CHIP , 1608 SIZE	1.1K OHM , 1/10W 5%	1	EA
R549	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R550	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R551	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R552	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R553	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
R555	CRJ10DJ241T	RES , CHIP , 1608 SIZE	240 OHM , 1/10W 5%	1	EA
R556	CRJ10DJ241T	RES , CHIP , 1608 SIZE	240 OHM , 1/10W 5%	1	EA
R557	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R558	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R561	CRJ14CJ330T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R562	CRJ14CJ330T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R563	CRJ14CJ330T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R564	CRJ14CJ330T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R567	CRJ01HJR020T	RES , CHIP , 6432 SIZE	0.02 OHM 1W 5%	1	EA
R568	CRJ01HJR020T	RES , CHIP , 6432 SIZE	0.02 OHM 1W 5%	1	EA
R569	CRJ01HJR020T	RES , CHIP , 6432 SIZE	0.02 OHM 1W 5%	1	EA
R570	CRJ01HJR020T	RES , CHIP , 6432 SIZE	0.02 OHM 1W 5%	1	EA
R575	CRJ10DJ203T	RES , CHIP , 1608 SIZE	20K OHM , 1/10W 5%	1	EA
R576	CRJ10DJ203T	RES , CHIP , 1608 SIZE	20K OHM , 1/10W 5%	1	EA

Ref. Designator	Part Number	Description		Qty	
AMP PCB					
R577	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R578	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R580	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R581	CRJ14CJ181T	RES , CHIP , 3216 SIZE	180 OHM , 1/4W 5%	1	EA
R582	CRJ14CJ181T	RES , CHIP , 3216 SIZE	180 OHM , 1/4W 5%	1	EA
R585	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R586	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R587	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R595	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R596	CRJ10DJ334T	RES , CHIP , 1608 SIZE	330K OHM , 1/10W 5%	1	EA
R597	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R598	CRJ10DJ392T	RES , CHIP , 1608 SIZE	3.9K OHM , 1/10W 5%	1	EA
R599	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R600	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R602	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R604	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R606	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R608	CRJ10DJ333T	RES , CHIP , 1608 SIZE	33K OHM , 1/10W 5%	1	EA
R609	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R610	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R612	CRJ10DJ682T	RES , CHIP , 1608 SIZE	6.8K OHM , 1/10W 5%	1	EA
R613	CRJ10DJ334T	RES , CHIP , 1608 SIZE	330K OHM , 1/10W 5%	1	EA
R614	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R619	CRJ14CJ472T	RES , CHIP , 3216 SIZE	4.7K OHM , 1/4W 5%	1	EA
R621	CRJ10DJ273T	RES , CHIP , 1608 SIZE	27K OHM , 1/10W 5%	1	EA
R622	CRJ10DJ273T	RES , CHIP , 1608 SIZE	27K OHM , 1/10W 5%	1	EA
R623	CRJ10DJ303T	RES , CHIP , 1608 SIZE	30K OHM , 1/10W 5%	1	EA
R624	CRJ10DJ303T	RES , CHIP , 1608 SIZE	30K OHM , 1/10W 5%	1	EA
R626	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R627	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R628	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R629	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R630	CRJ10DF8201T	RES , CHIP (8.2K/1%)		1	EA
R631	CRJ10DF3003T	RES , CHIP (300K/1%)		1	EA
R632	CRJ10DF8203T	RES , CHIP (820K/1%)		1	EA
R633	CRJ10DF3003T	RES , CHIP (300K/1%)		1	EA
R634	CRJ10DF2703T	RES , CHIP (270K/1%)		1	EA
R639	CRJ10DF1302T	RES , CHIP (13K/1%)		1	EA
R640	CRJ10DF1302T	RES , CHIP (13K/1%)		1	EA
R641	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R642	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R643	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R644	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R645	CRJ10DJ112T	RES , CHIP , 1608 SIZE	1.1K OHM , 1/10W 5%	1	EA
R646	CRJ10DJ112T	RES , CHIP , 1608 SIZE	1.1K OHM , 1/10W 5%	1	EA
R647	CRJ10DJ112T	RES , CHIP , 1608 SIZE	1.1K OHM , 1/10W 5%	1	EA
R648	CRJ10DJ112T	RES , CHIP , 1608 SIZE	1.1K OHM , 1/10W 5%	1	EA
R649	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R650	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R651	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R652	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R653	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
R655	CRJ10DJ241T	RES , CHIP , 1608 SIZE	240 OHM , 1/10W 5%	1	EA
R656	CRJ10DJ241T	RES , CHIP , 1608 SIZE	240 OHM , 1/10W 5%	1	EA
R657	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R658	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R662	CRJ14CJ330T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R664	CRJ14CJ330T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R667	CRJ01HJR020T	RES , CHIP , 6432 SIZE	0.02 OHM 1W 5%	1	EA
R668	CRJ01HJR020T	RES , CHIP , 6432 SIZE	0.02 OHM 1W 5%	1	EA
R669	CRJ01HJR020T	RES , CHIP , 6432 SIZE	0.02 OHM 1W 5%	1	EA
R670	CRJ01HJR020T	RES , CHIP , 6432 SIZE	0.02 OHM 1W 5%	1	EA
R676	CRJ10DJ203T	RES , CHIP , 1608 SIZE	20K OHM , 1/10W 5%	1	EA
R678	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R681	CRJ10DJ333T	RES , CHIP , 1608 SIZE	33K OHM , 1/10W 5%	1	EA
R682	CRJ10DJ272T	RES , CHIP , 1608 SIZE	2.7K OHM , 1/10W 5%	1	EA

Ref. Designator	Part Number	Description		Qty	
AMP PCB					
R683	CRJ10DJ153T	RES , CHIP , 1608 SIZE	15K OHM , 1/10W 5%	1	EA
R684	CRJ10DJ473T	RES , CHIP , 1608 SIZE	47K OHM , 1/10W 5%	1	EA
R685	CRJ10DJ332T	RES , CHIP , 1608 SIZE	3.3K OHM , 1/10W 5%	1	EA
R686	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R687	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R688	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R689	CRJ10DJ333T	RES , CHIP , 1608 SIZE	33K OHM , 1/10W 5%	1	EA
R690	CRJ10DJ333T	RES , CHIP , 1608 SIZE	33K OHM , 1/10W 5%	1	EA
R691	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R692	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R693	CRJ10DJ682T	RES , CHIP , 1608 SIZE	6.8K OHM , 1/10W 5%	1	EA
R694	CRJ10DJ682T	RES , CHIP , 1608 SIZE	6.8K OHM , 1/10W 5%	1	EA
R698	CRJ10DJ273T	RES , CHIP , 1608 SIZE	27K OHM , 1/10W 5%	1	EA
R700	CRJ10DJ682T	RES , CHIP , 1608 SIZE	6.8K OHM , 1/10W 5%	1	EA
R701	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R702	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R703	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R704	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R705	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R706	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R707	CRJ10DJ333T	RES , CHIP , 1608 SIZE	33K OHM , 1/10W 5%	1	EA
R708	CRJ10DJ333T	RES , CHIP , 1608 SIZE	33K OHM , 1/10W 5%	1	EA
R709	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R710	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R711	CRJ10DJ682T	RES , CHIP , 1608 SIZE	6.8K OHM , 1/10W 5%	1	EA
R712	CRJ10DJ682T	RES , CHIP , 1608 SIZE	6.8K OHM , 1/10W 5%	1	EA
R721	CRJ10DJ273T	RES , CHIP , 1608 SIZE	27K OHM , 1/10W 5%	1	EA
R722	CRJ10DJ273T	RES , CHIP , 1608 SIZE	27K OHM , 1/10W 5%	1	EA
R723	CRJ10DJ303T	RES , CHIP , 1608 SIZE	30K OHM , 1/10W 5%	1	EA
R724	CRJ10DJ303T	RES , CHIP , 1608 SIZE	30K OHM , 1/10W 5%	1	EA
R725	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R726	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R727	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R728	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R729	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R730	CRJ10DF8201T	RES , CHIP (8.2K/1%)		1	EA
R731	CRJ10DF3003T	RES , CHIP (300K/1%)		1	EA
R732	CRJ10DF8203T	RES , CHIP (820K/1%)		1	EA
R733	CRJ10DF3003T	RES , CHIP (300K/1%)		1	EA
R734	CRJ10DF2703T	RES , CHIP (270K/1%)		1	EA
R739	CRJ10DF1302T	RES , CHIP (13K/1%)		1	EA
R740	CRJ10DF1302T	RES , CHIP (13K/1%)		1	EA
R741	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R742	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R743	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R744	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R745	CRJ10DJ112T	RES , CHIP , 1608 SIZE	1.1K OHM , 1/10W 5%	1	EA
R746	CRJ10DJ112T	RES , CHIP , 1608 SIZE	1.1K OHM , 1/10W 5%	1	EA
R747	CRJ10DJ112T	RES , CHIP , 1608 SIZE	1.1K OHM , 1/10W 5%	1	EA
R748	CRJ10DJ112T	RES , CHIP , 1608 SIZE	1.1K OHM , 1/10W 5%	1	EA
R749	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R750	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R751	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R752	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R753	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
R755	CRJ10DJ241T	RES , CHIP , 1608 SIZE	240 OHM , 1/10W 5%	1	EA
R756	CRJ10DJ241T	RES , CHIP , 1608 SIZE	240 OHM , 1/10W 5%	1	EA
R757	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R758	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R761	CRJ14CJ330T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R762	CRJ14CJ330T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R763	CRJ14CJ330T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R764	CRJ14CJ330T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R767	CRJ01HJR020T	RES , CHIP , 6432 SIZE	0.02 OHM 1W 5%	1	EA
R768	CRJ01HJR020T	RES , CHIP , 6432 SIZE	0.02 OHM 1W 5%	1	EA
R769	CRJ01HJR020T	RES , CHIP , 6432 SIZE	0.02 OHM 1W 5%	1	EA

Ref. Designator	Part Number	Description		Qty	
AMP PCB					
R770	CRJ01HJR020T	RES , CHIP , 6432 SIZE	0.02 OHM 1W 5%	1	EA
R775	CRJ10DJ203T	RES , CHIP , 1608 SIZE	20K OHM , 1/10W 5%	1	EA
R776	CRJ10DJ203T	RES , CHIP , 1608 SIZE	20K OHM , 1/10W 5%	1	EA
R777	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R778	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R781	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R782	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R783	CRJ10DJ333T	RES , CHIP , 1608 SIZE	33K OHM , 1/10W 5%	1	EA
R784	CRJ10DJ333T	RES , CHIP , 1608 SIZE	33K OHM , 1/10W 5%	1	EA
R785	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R786	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R787	CRJ10DJ153T	RES , CHIP , 1608 SIZE	15K OHM , 1/10W 5%	1	EA
R788	CRJ10DJ153T	RES , CHIP , 1608 SIZE	15K OHM , 1/10W 5%	1	EA
R789	CRJ14CJ4R7T	RES , CHIP , 3216 SIZE	4.7 OHM , 1/4W 5%	1	EA
R790	CRJ14CJ4R7T	RES , CHIP , 3216 SIZE	4.7 OHM , 1/4W 5%	1	EA
R791	CRJ10DJ333T	RES , CHIP , 1608 SIZE	33K OHM , 1/10W 5%	1	EA
R792	CRJ10DJ333T	RES , CHIP , 1608 SIZE	33K OHM , 1/10W 5%	1	EA
R793	CRJ14CJ330T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R794	CRJ14CJ330T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R795	CRJ10DJ682T	RES , CHIP , 1608 SIZE	6.8K OHM , 1/10W 5%	1	EA
R796	CRJ10DJ682T	RES , CHIP , 1608 SIZE	6.8K OHM , 1/10W 5%	1	EA
R797	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R798	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R799	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R800	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R801	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R802	CRJ10DJ472T	RES , CHIP , 1608 SIZE	4.7K OHM , 1/10W 5%	1	EA
R803	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R804	CRJ10DJ223T	RES , CHIP , 1608 SIZE	22K OHM , 1/10W 5%	1	EA
R805	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R806	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R807	CRJ10DJ333T	RES , CHIP , 1608 SIZE	33K OHM , 1/10W 5%	1	EA
R808	CRJ10DJ333T	RES , CHIP , 1608 SIZE	33K OHM , 1/10W 5%	1	EA
R809	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R810	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R811	CRJ10DJ682T	RES , CHIP , 1608 SIZE	6.8K OHM , 1/10W 5%	1	EA
R812	CRJ10DJ682T	RES , CHIP , 1608 SIZE	6.8K OHM , 1/10W 5%	1	EA
R817	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
R819	CRJ10DJ334T	RES , CHIP , 1608 SIZE	330K OHM , 1/10W 5%	1	EA
R820	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R821	CRJ10DJ273T	RES , CHIP , 1608 SIZE	27K OHM , 1/10W 5%	1	EA
R822	CRJ10DJ273T	RES , CHIP , 1608 SIZE	27K OHM , 1/10W 5%	1	EA
R823	CRJ10DJ303T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R824	CRJ10DJ303T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R825	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R826	CRJ10DJ105T	RES , CHIP , 1608 SIZE	1M OHM , 1/10W 5%	1	EA
R827	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R828	CRJ10DJ101T	RES , CHIP , 1608 SIZE	100 OHM , 1/10W 5%	1	EA
R829	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R830	CRJ10DF8201T	RES , CHIP (8.2K/1%)		1	EA
R831	CRJ10DF3003T	RES , CHIP (300K/1%)		1	EA
R832	CRJ10DF8203T	RES , CHIP (820K/1%)		1	EA
R833	CRJ10DF3003T	RES , CHIP (300K/1%)		1	EA
R834	CRJ10DF2703T	RES , CHIP (270K/1%)		1	EA
R839	CRJ10DF1302T	RES , CHIP (13K/1%)		1	EA
R840	CRJ10DF1302T	RES , CHIP (13K/1%)		1	EA
R841	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R842	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R843	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R844	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R845	CRJ10DJ112T	RES , CHIP , 1608 SIZE	1.1K OHM , 1/10W 5%	1	EA
R846	CRJ10DJ112T	RES , CHIP , 1608 SIZE	1.1K OHM , 1/10W 5%	1	EA
R847	CRJ10DJ112T	RES , CHIP , 1608 SIZE	1.1K OHM , 1/10W 5%	1	EA
R848	CRJ10DJ112T	RES , CHIP , 1608 SIZE	1.1K OHM , 1/10W 5%	1	EA
R849	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R850	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA

Ref. Designator	Part Number	Description		Qty	
AMP PCB					
R851	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R852	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R853	CRJ10DJ0R0T	RES , CHIP , 1608 SIZE	0 OHM , 1/10W 5%	1	EA
R855	CRJ10DJ241T	RES , CHIP , 1608 SIZE	240 OHM , 1/10W 5%	1	EA
R856	CRJ10DJ241T	RES , CHIP , 1608 SIZE	240 OHM , 1/10W 5%	1	EA
R857	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R858	CRJ10DJ100T	RES , CHIP , 1608 SIZE	10 OHM , 1/10W 5%	1	EA
R861	CRJ14CJ330T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R862	CRJ14CJ330T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R863	CRJ14CJ330T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R864	CRJ14CJ330T	RES , CHIP , 3216 SIZE	33 OHM , 1/4W 5%	1	EA
R867	CRJ01HJR020T	RES , CHIP , 6432 SIZE	0.02 OHM 1W 5%	1	EA
R868	CRJ01HJR020T	RES , CHIP , 6432 SIZE	0.02 OHM 1W 5%	1	EA
R869	CRJ01HJR020T	RES , CHIP , 6432 SIZE	0.02 OHM 1W 5%	1	EA
R870	CRJ01HJR020T	RES , CHIP , 6432 SIZE	0.02 OHM 1W 5%	1	EA
R875	CRJ10DJ203T	RES , CHIP , 1608 SIZE	20K OHM , 1/10W 5%	1	EA
R876	CRJ10DJ203T	RES , CHIP , 1608 SIZE	20K OHM , 1/10W 5%	1	EA
R877	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R878	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R883	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R884	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R885	CRJ10DJ4R7T	RES , CHIP , 1608 SIZE	4.7 OHM , 1/10W 5%	1	EA
R887	CRJ10DJ303T	RES , CHIP , 1608 SIZE	30K OHM , 1/10W 5%	1	EA
R888	CRJ10DJ303T	RES , CHIP , 1608 SIZE	30K OHM , 1/10W 5%	1	EA
R890	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R894	CRJ10DJ153T	RES , CHIP , 1608 SIZE	15K OHM , 1/10W 5%	1	EA
R895	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R896	CRJ10DJ103T	RES , CHIP , 1608 SIZE	10K OHM , 1/10W 5%	1	EA
R897	CRJ10DJ102T	RES , CHIP , 1608 SIZE	1K OHM , 1/10W 5%	1	EA
R898	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R899	CRJ10DJ471T	RES , CHIP , 1608 SIZE	470 OHM , 1/10W 5%	1	EA
R900	CRJ10DJ273T	RES , CHIP , 1608 SIZE	27K OHM , 1/10W 5%	1	EA
VR51	HVN1RA103B01T	RES, SEMI FIXED(10K OHM)	RH0638C-103	1	EA
VR52	HVN1RA103B01T	RES, SEMI FIXED(10K OHM)	RH0638C-103	1	EA
VR61	HVN1RA103B01T	RES, SEMI FIXED(10K OHM)	RH0638C-103	1	EA
VR62	HVN1RA103B01T	RES, SEMI FIXED(10K OHM)	RH0638C-103	1	EA
VR71	HVN1RA103B01T	RES, SEMI FIXED(10K OHM)	RH0638C-103	1	EA
VR72	HVN1RA103B01T	RES, SEMI FIXED(10K OHM)	RH0638C-103	1	EA
VR81	HVN1RA103B01T	RES, SEMI FIXED(10K OHM)	RH0638C-103	1	EA
VR82	HVN1RA103B01T	RES, SEMI FIXED(10K OHM)	RH0638C-103	1	EA
R573	KRG2SANJ200H	RES , METAL OXIDE FILM	2W 20 OHM MINI	1	EA
R574	KRG2SANJ200H	RES , METAL OXIDE FILM	2W 20 OHM MINI	1	EA
R615	CRG1ANJ181H	RES , METAL OXIDE FILM	180 OHM 1W J	1	EA
R616	CRG1ANJ181H	RES , METAL OXIDE FILM	180 OHM 1W J	1	EA
R617	CRG1ANJ152H	RES , METAL OXIDE FILM	1.5K OHM 1W 5%	1	EA
R674	KRG2SANJ200H	RES , METAL OXIDE FILM	2W 20 OHM MINI	1	EA
R773	KRG2SANJ200H	RES , METAL OXIDE FILM	2W 20 OHM MINI	1	EA
R774	KRG2SANJ200H	RES , METAL OXIDE FILM	2W 20 OHM MINI	1	EA
R873	KRG2SANJ200H	RES , METAL OXIDE FILM	2W 20 OHM MINI	1	EA
R874	KRG2SANJ200H	RES , METAL OXIDE FILM	2W 20 OHM MINI	1	EA
R879	CRG1ANJ272H	RES , METAL OXIDE FILM	1.5K OHM 1W 5%	1	EA
Miscellaneous					
L557	CLZ9Z016Z	COIL , 100UH	6700-101K	1	EA
L657	CLZ9Z016Z	COIL , 100UH	6700-101K	1	EA
L757	CLZ9Z016Z	COIL , 100UH	6700-101K	1	EA
L857	CLZ9Z016Z	COIL , 100UH	6700-101K	1	EA
BD51	HLZ9Z018Z	CHIP , BEAD	HB-1M1608-601JT	1	EA
BD52	HLZ9Z018Z	CHIP , BEAD	HB-1M1608-601JT	1	EA
BD55	HLZ9Z014Z	CHIP , BEAD	HU-1H4516-600JT	1	EA
BD56	HLZ9Z014Z	CHIP , BEAD	HU-1H4516-600JT	1	EA
BD62	HLZ9Z018Z	CHIP , BEAD	HB-1M1608-601JT	1	EA
BD66	HLZ9Z014Z	CHIP , BEAD	HU-1H4516-600JT	1	EA
BD71	HLZ9Z018Z	CHIP , BEAD	HB-1M1608-601JT	1	EA
BD72	HLZ9Z018Z	CHIP , BEAD	HB-1M1608-601JT	1	EA

Ref. Designator	Part Number	Description		Qty	
AMP PCB					
BD75	HLZ9Z014Z	CHIP , BEAD	HU-1H4516-600JT	1	EA
BD76	HLZ9Z014Z	CHIP , BEAD	HU-1H4516-600JT	1	EA
BD81	HLZ9Z018Z	CHIP , BEAD	HB-1M1608-601JT	1	EA
BD82	HLZ9Z018Z	CHIP , BEAD	HB-1M1608-601JT	1	EA
BD85	HLZ9Z014Z	CHIP , BEAD	HU-1H4516-600JT	1	EA
BD86	HLZ9Z014Z	CHIP , BEAD	HU-1H4516-600JT	1	EA
AMP1	CMY2A216ZA	HEAT SINK ASS'Y		1	EA
	CMY2A216	SINK , HEAT		1	EA
	CTB3+8J	SCREW		4	EA
AMP2	CMY2A216UA	HEAT SINK ASS'Y		1	EA
	CMY2A216	SINK , HEAT		1	EA
	CTB3+8J	SCREW		4	EA
AMP3	CMY2A216XA	HEAT SINK ASS'Y		1	EA
	CMY2A216	SINK , HEAT		1	EA
	CTB3+8J	SCREW		4	EA
AMP4	CMY2A216VA	HEAT SINK ASS'Y		1	EA
	CMY2A216	SINK , HEAT		1	EA
	CTB3+8J	SCREW		4	EA
BN91	CWB3F005150UZ	WIRE ASS'Y		1	EA
CN11	KJP21GA117ZG	WAFER , CARD CABLE (21P 1M/	GF102-21S-TS	1	EA
CN23	KJP17GA117ZG	WAFER , CARD CABLE	GF102-17S-TS	1	EA
ET61	CMC1A111	PLATE , EARTH		1	EA
ET62	CMC1A111	PLATE , EARTH		1	EA
JK51	CJJ5P020Z	TERMINAL , SPEAKER		1	EA
JK61	CJJ5R006Z	TERMINAL , SPEAKER		1	EA
JK62	CJJ4M037Z	JACK , BOARD	S-440AE	1	EA
JK81	CJJ5P021Z	TERMINAL . SPEAKER	CVR700	1	EA
JW51	CWZCVR700JW11	WIRE ASS'Y		1	EA
L565	CLZ9Z045Z	COIL , SPEAKER (18UH/7A)	8019-11-180L	1	EA
L566	CLZ9Z045Z	COIL , SPEAKER (18UH/7A)	8019-11-180L	1	EA
L666	CLZ9Z045Z	COIL , SPEAKER (18UH/7A)	8019-11-180L	1	EA
L765	CLZ9Z045Z	COIL , SPEAKER (18UH/7A)	8019-11-180L	1	EA
L766	CLZ9Z045Z	COIL , SPEAKER (18UH/7A)	8019-11-180L	1	EA
L865	CLZ9Z045Z	COIL , SPEAKER (18UH/7A)	8019-11-180L	1	EA
L866	CLZ9Z045Z	COIL , SPEAKER (18UH/7A)	8019-11-180L	1	EA
RL51	HSL4A004ZU	RELAY	OSA-SS-212DM3	1	EA
RL61	HSL4A004ZU	RELAY	OSA-SS-212DM3	1	EA
RL71	HSL4A004ZU	RELAY	OSA-SS-212DM3	1	EA
RL81	HSL4A004ZU	RELAY	OSA-SS-212DM3	1	EA
SMPS PCB COP11686BSMPS					
NOTE: Part Numbers are not supplied, as ordinarily the entire SMPS Module should be replaced; descriptions and designators are supplied here only for reference.					
Capacitors					
C901		275V 224CAP-X	275VAC 224 "X"(15mm)	1	EA
C902		275V 224CAP-X	275VAC 224 "X"(15mm)	1	EA
C903		DA2GYE152MKCAP-Y	400VAC 152 "Y"(10mm)	1	EA
C904		DA2GYE471MKCAP-Y	400VAC 471 "Y"(10mm)	1	EA
C905		HE 200V 680µF 85`CCAP-EL	30Ø X 30mm	1	EA
C906		1KV 102CAP-CER	LOW LOSS TYPE	1	EA
C907		DEI 50/100V 333JCAP-FILM	50/100V 333J	1	EA
C908		RG 50V 22µF 105'CCAP-EL	5Ø	1	EA
C909		DEI 50/100V 222JCAP-FILM	50/100V 222J	1	EA
C910		1KV 102CAP-CER	LOW LOSS TYPE	1	EA
C911		DEI 50/100V 333JCAP-FILM	50/100V 333J	1	EA
C912		RG 50V 22µF 105'CCAP-EL	5Ø	1	EA
C913		DEI 50/100V 222JCAP-FILM	50/100V 222J	1	EA
C914		DEM630V103KCAP-FILM	630V 103K	1	EA
C915		CKB3A101MADACAP-CER	1KV 101	1	EA
C916		DEI 50/100V 333JCAP-FILM	50/100V 333J	1	EA
C917		RG 50V 22µF 105'CCAP-EL	5Ø	1	EA
C918		DEM630V103KCAP-FILM	630V 103K	1	EA
C921		RG 50V 22µF 105'CCAP-EL	5Ø	1	EA
C923		RG 50V 22µF 105'CCAP-EL	5Ø	1	EA

Ref. Designator	Part Number	Description		Qty	
SMPS PCB COP11686BSMPS					
C924		DA2GYE222MKCAP-Y	400VAC 222 "Y"(10mm)	1	EA
C926		WL 50V 2200㎌ 105'CCAP-EL	18Ø	1	EA
C928		WL 50V 2200㎌ 105'CCAP-EL	18Ø	1	EA
C929		DEI 50/100V 333JCAP-FILM	50/100V 333J	1	EA
C931		WL 50V 2200㎌ 105'CCAP-EL	18Ø	1	EA
C934		WL 50V 2200㎌ 105'CCAP-EL	18Ø	1	EA
C935		RG 35V 470㎌ 105'CCAP-EL	10Ø	1	EA
C936		RG 35V 470㎌ 105'CCAP-EL	10Ø	1	EA
C937		SG 50V 47㎌ 85'CCAP-EL	6.3Ø	1	EA
C938		RG 35V 470㎌ 105'CCAP-EL	10Ø	1	EA
C939		RG 35V 470㎌ 105'CCAP-EL	10Ø	1	EA
C940		SG 50V 47㎌ 85'CCAP-EL	6.3Ø	1	EA
C941		WB 16V 1500㎌ 105'CCAP-EL	12.5Ø	1	EA
C943		RG 50V 1㎌ 105'CCAP-EL	5Ø	1	EA
C944		WB 16V 1500㎌ 105'CCAP-EL	12.5Ø	1	EA
C945		CKB3A101MADACAP-CER	1KV 101	1	EA
C946		RG 50V 1㎌ 105'CCAP-EL	5Ø	1	EA
C947		WB 10V 1000㎌ 105'CCAP-EL	10Ø	1	EA
C948		RG 50V 1㎌ 105'CCAP-EL	5Ø	1	EA
C949		WB 10V 1000㎌ 105'CCAP-EL	10Ø	1	EA
C950		RG 50V 1㎌ 105'CCAP-EL	5Ø	1	EA
C951		RG 50V 1㎌ 105'CCAP-EL	5Ø	1	EA
C954		RG 50V 1㎌ 105'CCAP-EL	5Ø	1	EA
C955		RG 50V 1㎌ 105'CCAP-EL	5Ø	1	EA
C960,61		RD 10V 470㎌ 105'CCAP-EL	6.3Ø	1	EA
C961		RD 10V 470㎌ 105'CCAP-EL	6.3Ø	1	EA
C962		SG 50V 47㎌ 85'CCAP-EL	6.3Ø	1	EA
C965		HE 200V 680㎌ 85`CCAP-EL	30Ø X 30mm	1	EA
C970		DS1HYV104ZCAP-CER	50/100V 104	1	EA
C971		DA2GYE471MKCAP-Y	400VAC 471 "Y"(10mm)	1	EA
C972		DA2GYE471MKCAP-Y	400VAC 471 "Y"(10mm)	1	EA
C980		SG 50V 47㎌ 85'CCAP-EL	6.3Ø	1	EA
C991		DA2GYE471MKCAP-Y	400VAC 471 "Y"(10mm)	1	EA
C998		DA2GYE471MKCAP-Y	400VAC 471 "Y"(10mm)	1	EA
Semiconductors					
BD91		RS1505MD-BRIDGE	600V 15A	1	EA
D905		UF4004 D-U.F	400V 1A DO-41	1	EA
D906		UF4004 D-U.F	400V 1A DO-41	1	EA
D907,08		UF4007D-U.F	1000V 1A DO-41	1	EA
D908		UF4007D-U.F	1000V 1A DO-41	1	EA
D909		UF4004 D-U.F	400V 1A DO-41	1	EA
D910		UF4004 D-U.F	400V 1A DO-41	1	EA
D911		FFP10U20DND-FRD	200V,16/20A(CENTER +) -- FULL MOLDING TYPE	1	EA
D912		FFP10U20DPD-FRD	200V,16/20A(CENTER -) -- FULL MOLDING TYPE	1	EA
D914		31DF2D-FRD	200V,3A	1	EA
D915		1N4007D-R.F	1000V 1A DO-41	1	EA
D916		SF24D-U.F	200V 2A	1	EA
D917		1N4007D-R.F	1000V 1A DO-41	1	EA
D918		FSQ10A06D-SCHOTTKY	60V,10A	1	EA
D921		UF4004 D-U.F	400V 1A DO-41	1	EA
D922		1N4148 D-S/W	75V,150mA DO-35	1	EA
D923		SB240D-SCHOTTKY	40V,2A	1	EA
D924		SB290D-SCHOTTKY	90V,2A	1	EA
D926		1N4007D-R.F	1000V 1A DO-41	1	EA
D931		1N5819D-SCHOTTKY	40V,1A	1	EA
Q903		KSA708TR	-80V,700mA TO-92TYPE	1	EA
Q908		KSC1008TR	80V,700mA TO-92TYPE	1	EA
U901		KA5Q1565RF-YDTUIC-PWM	TO-3	1	EA
U902		KA5Q1565RF-YDTUIC-PWM	TO-3	1	EA
U903		FSDM0565R-WDTUIC-PWM	T0-220F-6L	1	EA
U904		KA5L0265RIC-PWM	T0-220F-4L	1	EA
U905		FAN431IC-SHUNT	36V 100mA TO-92 1%	1	EA

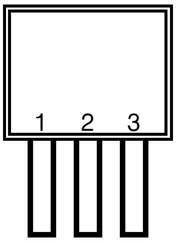
Ref. Designator	Part Number	Description		Qty	
SMPS PCB COP11686BSMPS					
U908		KA278R12CIC-REG	TO-220	1	EA
U909		FAN431IC-SHUNT	36V 100mA TO-92 1%	1	EA
U910		FAN431IC-SHUNT	36V 100mA TO-92 1%	1	EA
U911		KA7912IC-REG	TO-220	1	EA
U912		KA7905IC-REG	TO-220	1	EA
ZD91		1N5236BD-ZNER	0.5W 7.5V	1	EA
ZD92		1N5236BD-ZNER	0.5W 7.5V	1	EA
ZD93		1N5256BD-ZNER	0.5W 30V	1	EA
ZD94		1N5256BD-ZNER	0.5W 30V	1	EA
ZD96		1N5256BD-ZNER	0.5W 30V	1	EA
ZD96		1N5237BD-ZNER	0.5W 8.2V	1	EA
ZD97		1N5228BD-ZNER	0.5W 3.9V	1	EA
PC91		H11B817IC-PHOTO	5KV 10mm	1	EA
PC92		H11B817IC-PHOTO	5KV 10mm	1	EA
PC93		H11B817IC-PHOTO	5KV 10mm	1	EA
PC94		H11B817IC-PHOTO	5KV 10mm	1	EA
PC95		H11B817IC-PHOTO	5KV 10mm	1	EA
Resistors					
R901		1/4W 1M-J MINI	R-C.F	1	EA
R902		1/2W 3.3M	MG REGISTOR	1	EA
R903		1/8W 120K-J	R-C.F	1	EA
R904		1/8W 510-J	R-C.F	1	EA
R905		1/8W 680-J	R-C.F	1	EA
R906		1/8W 121K-J	R-C.F	1	EA
R907		1/8W 511-J	R-C.F	1	EA
R908		1/8W 681-J	R-C.F	1	EA
R909		2W 68K MINI	R-C.F	1	EA
R911		1/8W 100-J	R-C.F	1	EA
R912		1/8W 10K-J	R-C.F	1	EA
R913		1/8W 1K-J	R-C.F	1	EA
R914		1/8W 15-J	R-C.F	1	EA
R915		1/8W 10-J	R-C.F	1	EA
R916		1/8W 2K-J	R-C.F	1	EA
R917		1/8W 5.1K-J	R-C.F	1	EA
R918		1/8W 94K-F	R-C.F	1	EA
R919		1/8W 6.8K-F	R-C.F	1	EA
R920		2W 2.7K-J MINI	R-C.F	1	EA
R921		1/8W 11K-J	R-C.F	1	EA
R921		1/8W 101-J	R-C.F	1	EA
R922		1/8W 102-J	R-C.F	1	EA
R928		1/2W 100K-J MINI	R-C.F	1	EA
R929		1/4W 330K-J MINI	R-C.F	1	EA
R934		1/8W 3K-J	R-C.F	1	EA
R935		1/8W 103-J	R-C.F	1	EA
R936		1/8W 1.5K-F	R-C.F	1	EA
R937		1/8W 1.3K-F	R-C.F	1	EA
R939		2W 12-J MINI	R-C.F	1	EA
R941		1/8W 4K-J	R-C.F	1	EA
R942		1/8W 1.54K-F	R-C.F	1	EA
R943		1/8W 1.2K-F	R-C.F	1	EA
R944		1/8W 5.2K-J	R-C.F	1	EA
R945		1/8W 3.9K-F	R-C.F	1	EA
R946		1/8W 2.3K-F	R-C.F	1	EA
R947		1/8W 10K-F	R-C.F	1	EA
R948		1/8W 2K-J	R-C.F	1	EA
R949		1/8W 682-J	R-C.F	1	EA

Ref. Designator	Part Number	Description		Qty	
SMPS PCB	**COP11686BSMPS**				
R950		1/8W 104-J	R-C.F	1	EA
R970		1/8W 5K-J	R-C.F	1	EA
R981		1/8W 5.3K-J	R-C.F	1	EA
R982		1/8W 5.4K-J	R-C.F	1	EA
R983		1/8W 5.5K-J	R-C.F	1	EA
R984		2W 2.8K-J MINI	R-C.F	1	EA
R986		1/8W 15K-J	R-C.F	1	EA
R988		1/8W 5.6K-J	R-C.F	1	EA
R989		2W 12-J MINI	R-C.F	1	EA
TN91		10D221K	VARISTOR	1	EA
Miscellaneous					
CN91		CONN-WAFER	YW-396-03AV	1	EA
CN92		CONN-WAFER	35313-05P	1	EA
CN93		CONN-WAFER	53014-15P	1	EA
CN94		CONN-WAFER	53014-08P	1	EA
CN95		CONN-WAFER	JWT-2.5mm-07P	1	EA
F901		218-008MXEFUSE	8A 250V(LEAD TYPE)	1	EA
H901		HTSK-AL	55X70X30	1	EA
H902		HTSK-AL	55X70X30	1	EA
H903		HTSK-AL	55X24X17	1	EA
H904		HTSK-AL	55X15X10.5	1	EA
H905		HTSK-AL	55X15X10.5	1	EA
H906		HTSK-AL	55X15X10.5	1	EA
H907		HTSK-AL	55X15X10.5	1	EA
H908		HTSK-AL	55X15X10.5	1	EA
L901		COIL-CHOKE	BAR 5X20 (3.9uH)	1	EA
L902		COIL-CHOKE	BAR 5X20 (3.9uH)	1	EA
L903		COIL-CHOKE	DR 6.5X7.5(10uH)	1	EA
L904		COIL-CHOKE	DR 6.5X7.5(10uH)	1	EA
L905		COIL-CHOKE	BAR 5X20 (3.9uH)	1	EA
L906		COIL-CHOKE	DR 6.5X7.5(10uH)	1	EA
L907		COIL-CHOKE	DR 6.5X7.5(10uH)	1	EA
L908		COIL-CHOKE	DR 6.5X7.5(10uH)	1	EA
LF91		LS288506LINE-FILTER	LF-2828 7mH	1	EA
LF92		LS288506LINE-FILTER	LF-2828 7mH	1	EA
NF91		AN1885120NOISE-FILTER	18Ø	1	EA
NT91		5D-15THERMISTOR	15Ø 5Ω	1	EA
NT92		5D-15THERMISTOR	15Ø 5Ω	1	EA
T901		T020002TRANS	EER4242S	1	EA
T902		T020002TRANS	EER4242S	1	EA
T903		T005004TRANS	EER2828S	1	EA
T904		T000102TRANS	EE1927S	1	EA
Miscellaneous					
	CTB3+10GFZ	SCREW		32	EA
	CTB3+6J	SCREW		20	EA
	CTB3+6JFC	SCREW		2	EA
	CTB3+8GFZ	SCREW		5	EA
	CTB4+10JFZ	SCREW		4	EA
	CTB4+6FFZ	SCREW		7	EA
	CTW3+20J	SCREW		7	EA
	CTW3+8J	SCREW		10	EA
	CUA1A243	CHASSIS , BOTTOM	CVR700	1	EA
	CWC1B4A13B080B	CARD CABLE		1	EA
	CWC1B4A17A080B	CARD CABLE		1	EA
	CWC1B4A21A080B	CARD CABLE		1	EA
	CWC1B4A25A130B	CARD CABLE		1	EA
	CWC1B4A25A250B	CARD CABLE		1	EA
	HDME1225L12BFS	FAN		1	EA
	HDMF410T12L1C01	FAN , MOTOR	BFQ-1	1	EA
	HNVCVR700AV3PLU	PDP CONTROL BOX		1	EA

Ref. Designator	Part Number	Description		Qty	
SMPS PCB COP11686BSMPS					
	KHR1A028	BUSHING , AC CORD		1	EA
	KMC1A241	SHIELD CUSHION	10X25X10	6	EA
	KNW1A028	WASHER		1	EA
	KGB1A139Z	BADGE,JBL		1	EA
	KHG1A050	RUBBER , CUSHION		4	EA
	KHR301	CLAMPER		8	EA
	KMC1A186	SHIELD, CUSHION		5	EA
	KHE154	CLAMPER , ARM		0.12	M
	CKC2B153S46	CABINET,TOP		1	EA
	CTB3+8J	SCREW		5	EA
	CTB3+8JFC	SCREW		14	EA
	CTB4+6FFC	SCREW		6	EA
	CTS3+8J	SCREW		3	EA
	CUACVR700	BOTTOM CHASSIS ASS'Y		1	EA
	CHD1A036FZ	SCREW , SPECIAL	AVR330/AVR4600	4	EA
	CHD1A051	SCREW , SPECIAL	CVR700	4	EA
	CHE1A030	HOLDER , PCB		7	EA
	CHG1A160	RUBBER	H=16 (15X20)	2	EA
	CHG1A219	RUBBER(A)	T=1.0	10	EA
	CHG1A283	RUBBER	CVR700	4	EA
	CHG1A311	RUBBER , FAN		1	EA
	CJA523FBYA	CORD , POWER		1	EA
	CNVMV014MA080	**AM,FM TUNER MODULE**		**1**	
	HNVCVR700AV3PLU	**PDP SHIELDED VIDEO CONTROL BOX**		**1**	

Transistor , Regulator BLOCK DIAGRAM

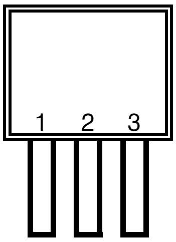
TO-92M



1. Emitter
2. Collector
3. Base

KRA102M KRC102M

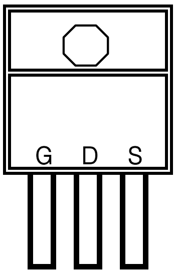
TO-92S



1. Emitter
2. Collector
3. Base

KSC2785Y KSA1175Y

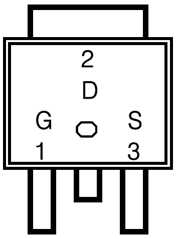
TO-220F



G : Gate
D : Drain
S : Source

FQPF13N10

D-PAK

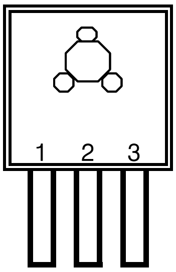


1: IN
2: GND
3: OUT

G: Gate
D: Drain
S: Source

KA7809R
FQD5P10 (F.E.T)

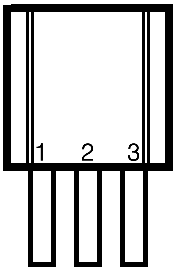
TO-126



1. Emitter
2. Collector
3. Base

KSB1151Y

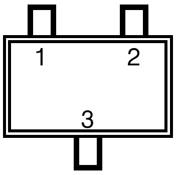
TO-92L



1. Emitter
2. Collector
3. Base

KSC2316Y
KSA916Y

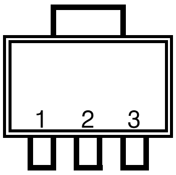
SC-59



1. Source
2. Gate
3. Drain

2SK2731

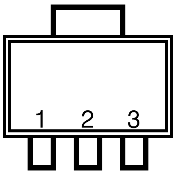
SOT-223



1. GND
2. OUT
3. IN

RC1117S33

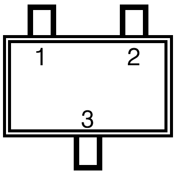
SOT-89



3. Base
2. Collector
3. Emitter

KTA1664

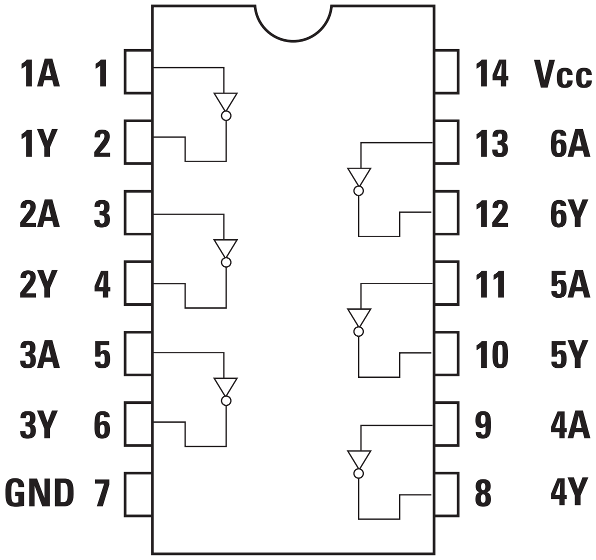
SOT-23



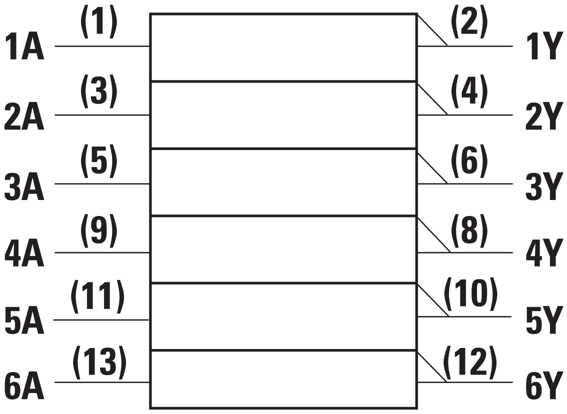
1. Emitter
3. Base
3. Collector

KRC111S KTA1504
KTD1304 KTC3875
KRC102S KRC114S

■ PIN ASSIGNMENT (74HCU04AFN : IC13,IC39~IC42)


1A 1
1Y 2
2A 3
2Y 4
3A 5
3Y 6
GND 7
14 Vcc
13 6A
12 6Y
11 5A
10 5Y
9 4A
8 4Y

■ LOGIC SYMBOL


1A (1)
2A (3)
3A (5)
4A (9)
5A (11)
6A (13)
(2) 1Y
(4) 2Y
(6) 3Y
(8) 4Y
(10) 5Y
(12) 6Y

■ TRUTH TABLE

A	Y
L	H
H	L

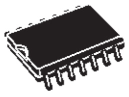
*** 74VHCT32A : IC45**

74VHCT32A

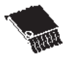
QUAD 2-INPUT OR GATE

PRELIMINARY DATA

- HIGH SPEED: t_{PD} = 5 ns (TYP.) at V_{CC} = 5V
- LOW POWER DISSIPATION: I_{CC} = 2 μA (MAX.) at T_A = 25 °C
- COMPATIBLE WITH TTL OUTPUTS: V_{IH} = 2V (MIN), V_{IL} = 0.8V (MAX)
- POWER DOWN PROTECTION ON INPUTS & OUTPUTS
- SYMMETRICAL OUTPUT IMPEDANCE: $|I_{OH}| = I_{OL}$ = 8 mA (MIN)
- BALANCED PROPAGATION DELAYS: $t_{PLH} \cong t_{PHL}$
- OPERATING VOLTAGE RANGE: V_{CC} (OPR) = 4.5V to 5.5V
- PIN AND FUNCTION COMPATIBLE WITH 74 SERIES 32
- IMPROVED LATCH-UP IMMUNITY
- LOW NOISE: V_{OLP} = 0.8V (Max.)



M
(Micro Package)



T
(TSSOP Package)

ORDER CODES :

M	T
74VHCT32AM	74VHCT32AT

DESCRIPTION

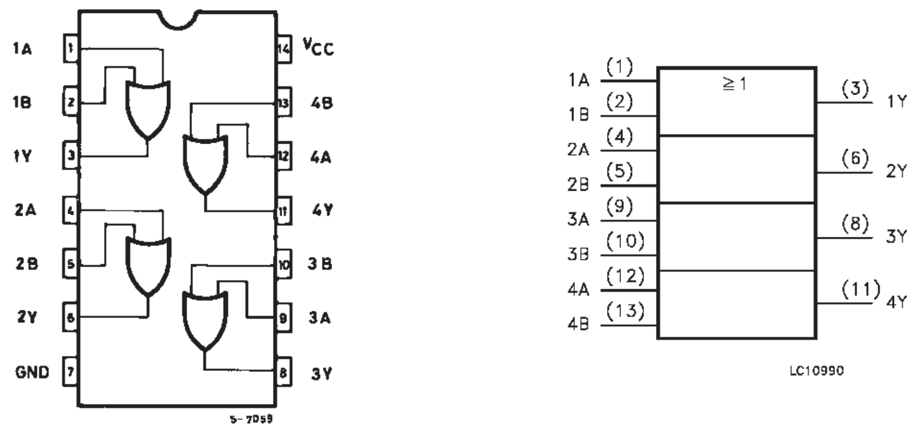
The 74VHCT32A is an advanced high-speed CMOS QUAD 2-INPUT OR GATE fabricated with sub-micron silicon gate and double-layer metal wiring C^2MOS technology.

The internal circuit is composed of 2 stages including buffer output, which provide high noise immunity and stable output.

Power down protection is provided on all inputs and outputs and 0 to 7V can be accepted on inputs with no regard to the supply voltage. This device can be used to interface 5V to 3V.

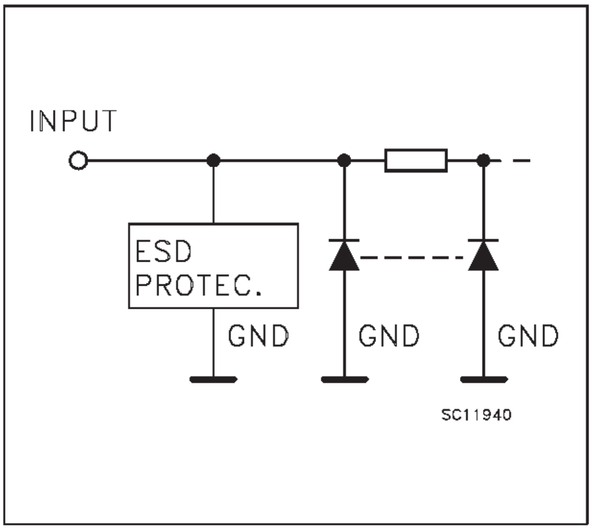
All inputs and outputs are equipped with protection circuits against static discharge, giving them 2KV ESD immunity and transient excess voltage.

PIN CONNECTION AND IEC LOGIC SYMBOLS



74VHCT32A

INPUT EQUIVALENT CIRCUIT



PIN DESCRIPTION

PIN No	SYMBOL	NAME AND FUNCTION
1, 4, 9, 12	1A to 4A	Data Inputs
2, 5, 10, 13	1B to 4B	Data Inputs
3, 6, 8, 11	1Y to 4Y	Data Outputs
7	GND	Ground (0V)
14	V_{CC}	Positive Supply Voltage

TRUTH TABLE

A	B	Y
L	L	L
L	H	H
H	L	H
H	H	H

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CC}	Supply Voltage	-0.5 to +7.0	V
V_I	DC Input Voltage	-0.5 to +7.0	V
V_O	DC Output Voltage (see note 1)	-0.5 to +7.0	V
V_O	DC Output Voltage (see note 2)	-0.5 to V_{CC} + 0.5	V
I_{IK}	DC Input Diode Current	- 20	mA
I_{OK}	DC Output Diode Current	± 20	mA
I_O	DC Output Current	± 25	mA
I_{CC} or I_{GND}	DC V_{CC} or Ground Current	± 50	mA
T_{stg}	Storage Temperature	-65 to +150	°C
T_L	Lead Temperature (10 sec)	300	°C

Absolute Maximum Ratings are those values beyond which damage to the device may occur. Functional operation under these condition is not implied.
1) V_{CC} = 0V
2) High or Low State

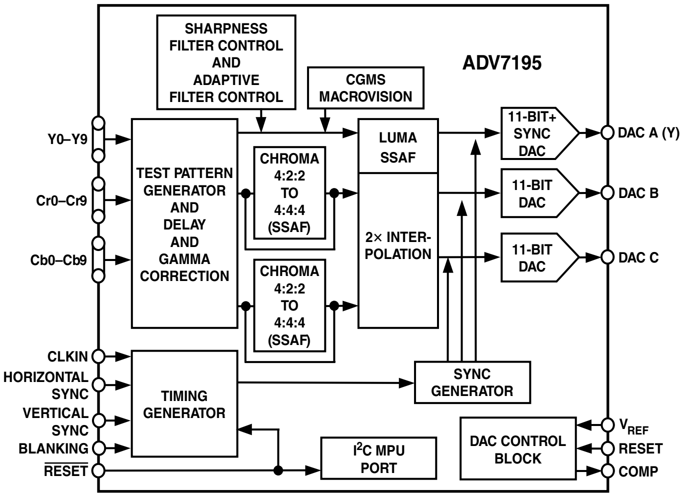
RECOMMENDED OPERATING CONDITIONS

Symbol	Parameter	Value	Unit
V_{CC}	Supply Voltage	4.5 to 5.5	V
V_I	Input Voltage	0 to 5.5	V
V_O	Output Voltage (see note 1)	0 to 5.5	V
V_O	Output Voltage (see note 2)	0 to V_{CC}	V
T_{op}	Operating Temperature	-40 to +85	°C
dt/dv	Input Rise and Fall Time (see note 3) (V_{CC} = 5.0 ± 0.5V)	0 to 20	ns/V

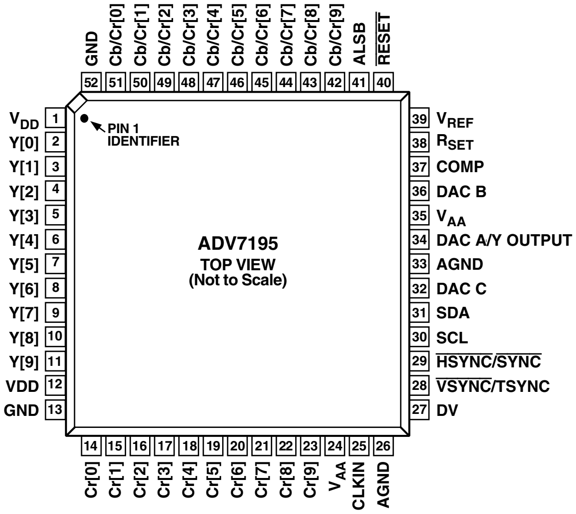
1) V_{CC} = 0V
2) High or Low State
3) V_{IN} from 0.8V to 2 V

ADV7195 < IC22>

* FUNCTIONAL BLOCK DIAGRAM


SHARPNESS FILTER CONTROL AND ADAPTIVE FILTER CONTROL
CGMS MACROVISION
ADV7195
Y0–Y9
Cr0–Cr9
Cb0–Cb9
TEST PATTERN GENERATOR AND DELAY AND GAMMA CORRECTION
CHROMA 4:2:2 TO 4:4:4 (SSAF)
CHROMA 4:2:2 TO 4:4:4 (SSAF)
LUMA SSAF
2× INTER-POLATION
11-BIT+ SYNC DAC
11-BIT DAC
11-BIT DAC
DAC A (Y)
DAC B
DAC C
CLKIN
HORIZONTAL SYNC
VERTICAL SYNC
BLANKING
RESET
TIMING GENERATOR
SYNC GENERATOR
I²C MPU PORT
DAC CONTROL BLOCK
VREF
RESET
COMP

* PIN CONFIGURATION


GND 52
Cb/Cr[0] 51
Cb/Cr[1] 50
Cb/Cr[2] 49
Cb/Cr[3] 48
Cb/Cr[4] 47
Cb/Cr[5] 46
Cb/Cr[6] 45
Cb/Cr[7] 44
Cb/Cr[8] 43
Cb/Cr[9] 42
ALSB 41
RESET 40
VDD 1
Y[0] 2
Y[1] 3
Y[2] 4
Y[3] 5
Y[4] 6
Y[5] 7
Y[6] 8
Y[7] 9
Y[8] 10
Y[9] 11
VDD 12
GND 13
PIN 1 IDENTIFIER
ADV7195
TOP VIEW
(Not to Scale)
39 VREF
38 RSET
37 COMP
36 DAC B
35 VAA
34 DAC A/Y OUTPUT
33 AGND
32 DAC C
31 SDA
30 SCL
29 HSYNC/SYNC
28 VSYNC/TSYNC
27 DV
14 Cr[0]
15 Cr[1]
16 Cr[2]
17 Cr[3]
18 Cr[4]
19 Cr[5]
20 Cr[6]
21 Cr[7]
22 Cr[8]
23 Cr[9]
24 VAA
25 CLKIN
26 AGND

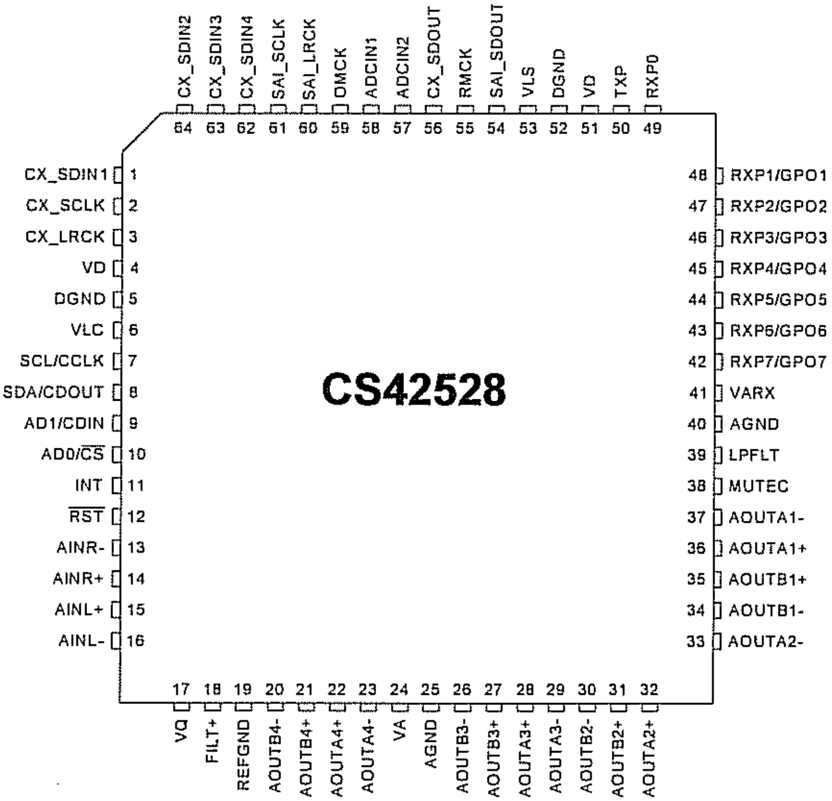
PIN FUNCTION DESCRIPTIONS

Pin	Mnemonic	Input/Output	Function
1, 12	V_{DD}	P	Digital Power Supply
2–11	Y0–Y9	I	10-bit progressive scan/HDTV input port for Y data. Input for G data when RGB data is input.
13, 52	GND	G	Digital Ground
14–23	Cr0–Cr9	I	10-Bit Progressive Scan/HDTV Input Port for Color Data in 4:4:4 Input Mode. In 4:2:2 mode this input port is not used. Input port for R data when RGB data is input.
24, 35	V_{AA}	P	Analog Power Supply
25	CLKIN	I	Pixel Clock Input. Requires a 27 MHz reference clock for standard operation in Progressive Scan Mode or a 74.25 MHz (74.1758 MHz) reference clock in HDTV mode.
26, 33	AGND	G	Analog Ground
27	DV	I	Video Blanking Control Signal Input
28	$\overline{\text{VSYNC}}$/ TSYNC	I	$\overline{\text{VSYNC}}$, Vertical Sync Control Signal Input or TSYNC Input Control Signal in Async Timing Mode
29	$\overline{\text{HSYNC}}$/ $\overline{\text{SYNC}}$	I	$\overline{\text{HSYNC}}$, Horizontal Sync Control Signal Input or $\overline{\text{SYNC}}$ Input Control Signal in Async Timing Mode
30	SCL	I	MPU Port Serial Interface Clock Input
31	SDA	I/O	MPU Port Serial Data Input/Output
32	DAC C	O	Color Component Analog Output of Input Data on Cb/Cr9–0 Input Pins
34	DAC A	O	Y Analog Output
36	DAC B	O	Color Component Analog Output of Input Data on Cr9–Cr0 Input Pins
37	COMP	O	Compensation Pin for DACs. Connect 0.1 μF Capacitor from COMP pin to V_{AA}.
38	R_{SET}	I	A 2470 Ω resistor for input ranges 64–940 and 64–960 (output standards EIA-770.1–EIA-770.3) must be connected from this pin to ground and is used to control the amplitudes of the DAC outputs. For input ranges 0–1023 (output standards RS-170, RS-343A) the R_{SET} value must be 2820 Ω.
39	V_{REF}	I/O	Optional External Voltage Reference Input for DACs or Voltage Reference Output (1.235 V)
40	$\overline{\text{RESET}}$	I	This input resets the on-chip timing generator and sets the ADV7195 into Default Register setting. Reset is an active low signal.
41	ALSB	I	TTL Address Input. This signal sets up the LSB of the MPU address. When this pin is tied high, the I^2C filter is activated, which reduces noise on the I^2C Interface. When this pin is tied low, the input bandwidth on the I^2C interface is increased.
42–51	Cb/Cr9–0	I	10-Bit Progressive scan/HDTV input port for color data. In 4:2:2 mode the multiplexed CrCb data must be input on these pins. Input port for B data when RGB is input.

CS42528 : IC32

CS42528

2 PIN DESCRIPTIONS


CX_SDIN2
CX_SDIN3
CX_SDIN4
SAI_SCLK
SAI_LRCK
OMCK
ADCIN1
ADCIN2
CX_SDOUT
RMCK
SAI_SDOUT
VLS
DGND
VD
TXP
RXP0
64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49
CX_SDIN1 1
CX_SCLK 2
CX_LRCK 3
VD 4
DGND 5
VLC 6
SCL/CCLK 7
SDA/CDOUT 8
AD1/CDIN 9
AD0/CS 10
INT 11
RST 12
AINR- 13
AINR+ 14
AINL+ 15
AINL- 16
48 RXP1/GPO1
47 RXP2/GPO2
46 RXP3/GPO3
45 RXP4/GPO4
44 RXP5/GPO5
43 RXP6/GPO6
42 RXP7/GPO7
41 VARX
40 AGND
39 LPFLT
38 MUTEC
37 AOUTA1-
36 AOUTA1+
35 AOUTB1+
34 AOUTB1-
33 AOUTA2-
CS42528
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
VQ
FILT+
REFGND
AOUTB4-
AOUTB4+
AOUTA4+
AOUTA4-
VA
AGND
AOUTB3-
AOUTB3+
AOUTA3+
AOUTA3-
AOUTB2-
AOUTB2+
AOUTA2+

Pin Name	#	Pin Description
CX_SDIN1 **CX_SDIN2** **CX_SDIN3** **CX_SDIN4**	1 64 63 62	**Codec Serial Audio Data Input** (*Input*) - Input for two's complement serial audio data.
CX_SCLK	2	**CODEC Serial Clock** *(Input/Output)* - Serial clock for the CODEC serial audio interface.
CX_LRCK	3	**CODEC Left Right Clock** (*Input/Output*) - Determines which channel, Left or Right, is currently active on the CODEC serial audio data line.
VD	4 51	**Digital Power** (*Input*) - Positive power supply for the digital section.
DGND	5 52	**Digital Ground** (*Input*) - Ground reference. Should be connected to digital ground.
VLC	6	**Control Port Power** (*Input*) - Determines the required signal level for the control port.
SCL/CCLK	7	**Serial Control Port Clock** (*Input*) - Serial clock for the serial control port. Requires an external pull-up resistor to the logic interface voltage in I^2C mode as shown in the Typical Connection Diagram.
SDA/CDOUT	8	**Serial Control Data** (*Input/Output*) - SDA is a data I/O line in I^2C mode and requires an external pull-up resistor to the logic interface voltage, as shown in the Typical Connection Diagram. CDOUT is the output data line for the control port interface in SPI mode.
AD1/CDIN	9	**Address Bit 1 (I^2C)/Serial Control Data (SPI)** (*Input*) - AD1 is a chip address pin in I^2C mode; CDIN is the input data line for the control port interface in SPI mode.

AD0/$\overline{\text{CS}}$	10	**Address Bit 0 (I^{2}C)/Control Port Chip Select (SPI)** *(Input)* - AD0 is a chip address pin in I^{2}C mode; $\overline{\text{CS}}$ is the chip select signal in SPI mode.
INT	11	**Interrupt** *(Output)* - The CS42528 will generate an interrupt condition as per the Interrupt Mask register. See "Interrupts" on page 40 for more details.
$\overline{\text{RST}}$	12	**$\overline{\text{Reset}}$** (*Input*) - The device enters a low power mode and all internal registers are reset to their default settings when low.
AINR- **AINR+**	13 14	**Differential Right Channel Analog Input** (*Input*) - Signals are presented differentially to the delta-sigma modulators via the AINR+/- pins.
AINL+ **AINL-**	15 16	**Differential Left Channel Analog Input** (*Input*) - Signals are presented differentially to the delta-sigma modulators via the AINL+/- pins.
VQ	17	**Quiescent Voltage** (*Output*) - Filter connection for internal quiescent reference voltage.
FILT+	18	**Positive Voltage Reference** (*Output*) - Positive reference voltage for the internal sampling circuits.
REFGND	19	**Reference Ground** (*Input*) - Ground reference for the internal sampling circuits.
AOUTA1 +,- **AOUTB1 +,-** **AOUTA2 +,-** **AOUTB2 +,-** **AOUTA3 +,-** **AOUTB3 +,-** **AOUTA4 +,-** **AOUTB4 +,-**	36,37 35,34 32,33 31,30 28,29 27,26 22,23 21,20	**Differential Analog Output** (*Output*) - The full-scale differential analog output level is specified in the Analog Characteristics specification table.
VA **VARX**	24 41	**Analog Power** (*Input*) - Positive power supply for the analog section.
AGND	25 40	**Analog Ground** (*Input*) - Ground reference. Should be connected to analog ground.
MUTEC	38	**Mute Control** (*Output*) - The Mute Control pin outputs high impedance following an initial power-on condition or whenever the PDN bit is set to a '1', forcing the codec into power-down mode. The signal will remain in a high impedance state as long as the part is in power-down mode. The Mute Control pin goes to the selected "active" state during reset, muting, or if the master clock to left/right clock frequency ratio is incorrect. This pin is intended to be used as a control for external mute circuits to prevent the clicks and pops that can occur in any single supply system. The use of external mute circuits are not mandatory but may be desired for designs requiring the absolute minimum in extraneous clicks and pops.
LPFLT	39	**PLL Loop Filter** (*Output*) - An RC network should be connected between this pin and ground.
RXP7/GPO7 **RXP6/GPO6** **RXP5/GPO5** **RXP4/GPO4** **RXP3/GPO3** **RXP2/GPO2** **RXP1/GPO1**	42 43 44 45 46 47 48	**S/PDIF Receiver Input/ General Purpose Output** (*Input/Output*) - Receiver inputs for S/PDIF encoded data. The CS42528 has an internal 8:2 multiplexer to select the active receiver port, according to the Receiver Mode Control 2 register. These pins can also be configured as general purpose output pins, ADC Overflow indicators or Mute Control outputs according to the RXP/General Purpose Pin Control registers.
RXP0	49	**S/PDIF Receiver Input** (*Input*) - Dedicated receiver input for S/PDIF encoded data.
TXP	50	**S/PDIF Transmitter Output** (*Output*) - S/PDIF encoded data output, mapped directly from one of the receiver inputs as indicated by the Receiver Mode Control 2 register.
VLS	53	**Serial Port Interface Power** (*Input*) - Determines the required signal level for the serial port interfaces.
SAI_SDOUT	54	**Serial Audio Interface Serial Data Output** (*Output*) - Output for two's complement serial audio PCM data from the S/PDIF incoming stream. This pin can also be configured to transmit the output of the internal and external ADCs.
RMCK	55	**Recovered Master Clock** (*Output*) - Recovered master clock output from the External Clock Reference (OMCK, pin 59) or the PLL which is locked to the incoming S/PDIF stream or CX_LRCK.

CX_SDOUT	56	**CODEC Serial Data Output** (*Output*) - Output for two's complement serial audio data from the internal and external ADCs.
ADCIN1 **ADCIN2**	58 57	**External ADC Serial Input** (*Input*) - The CS42528 provides for up to two external stereo analog to digital converter inputs to provide a maximum of six channels on one serial data output line when the CS42528 is placed in One Line mode.
OMCK	59	**External Reference Clock** (*Input*) - External clock reference that must be within the ranges specified in the register "OMCK Frequency (OMCK Freqx)" on page 53.
SAI_LRCK	60	**Serial Audio Interface Left/Right Clock** (*Input/Output*) - Determines which channel, Left or Right, is currently active on the serial audio data line.
SAI_SCLK	61	**Serial Audio Interface Serial Clock** *(Input/Output)* - Serial clock for the Serial Audio Interface.

CS494003 : IC31

12.0 PIN DESCRIPTION

12.1 144-Pin LQFP Package Pin Layout

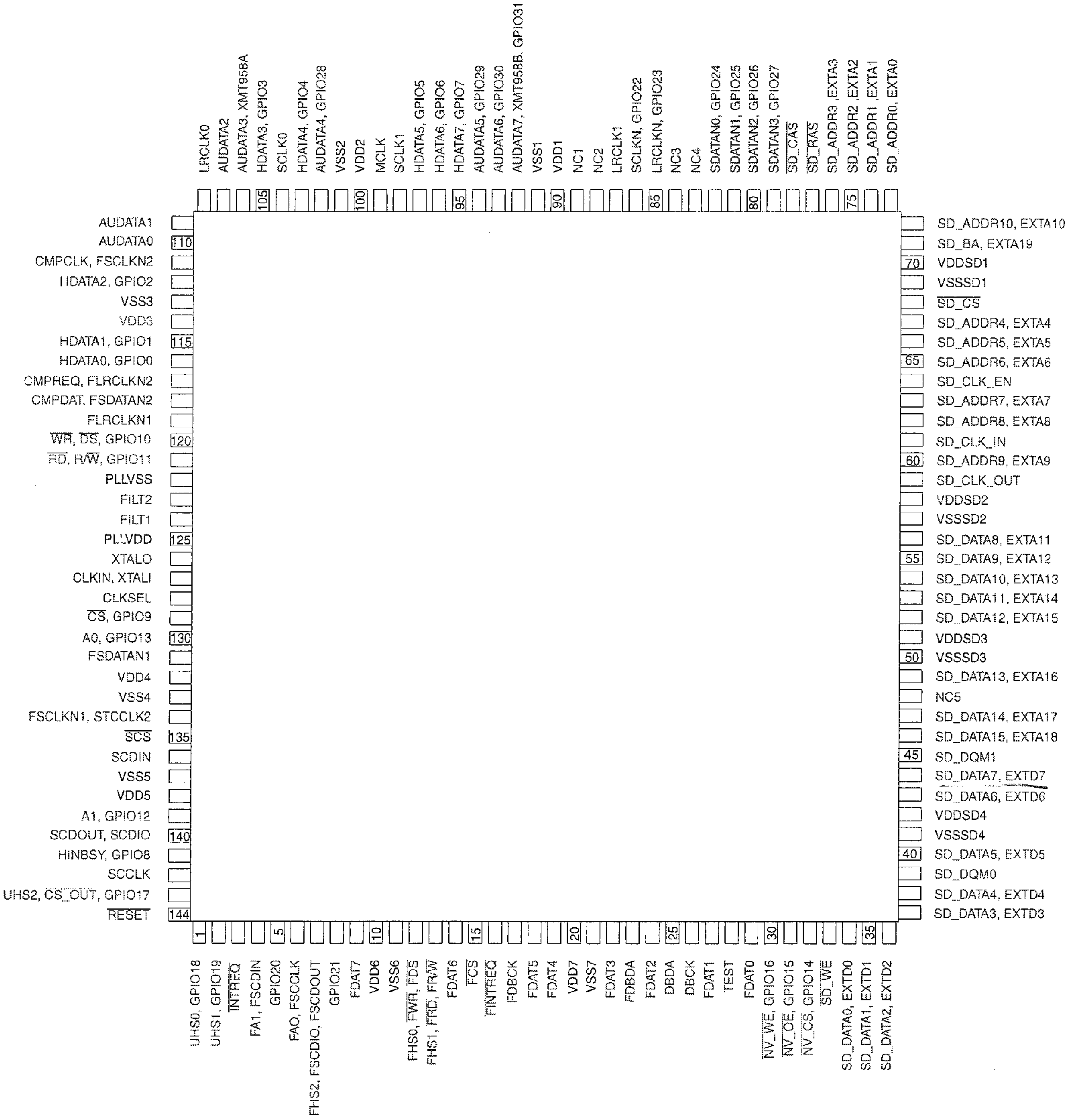
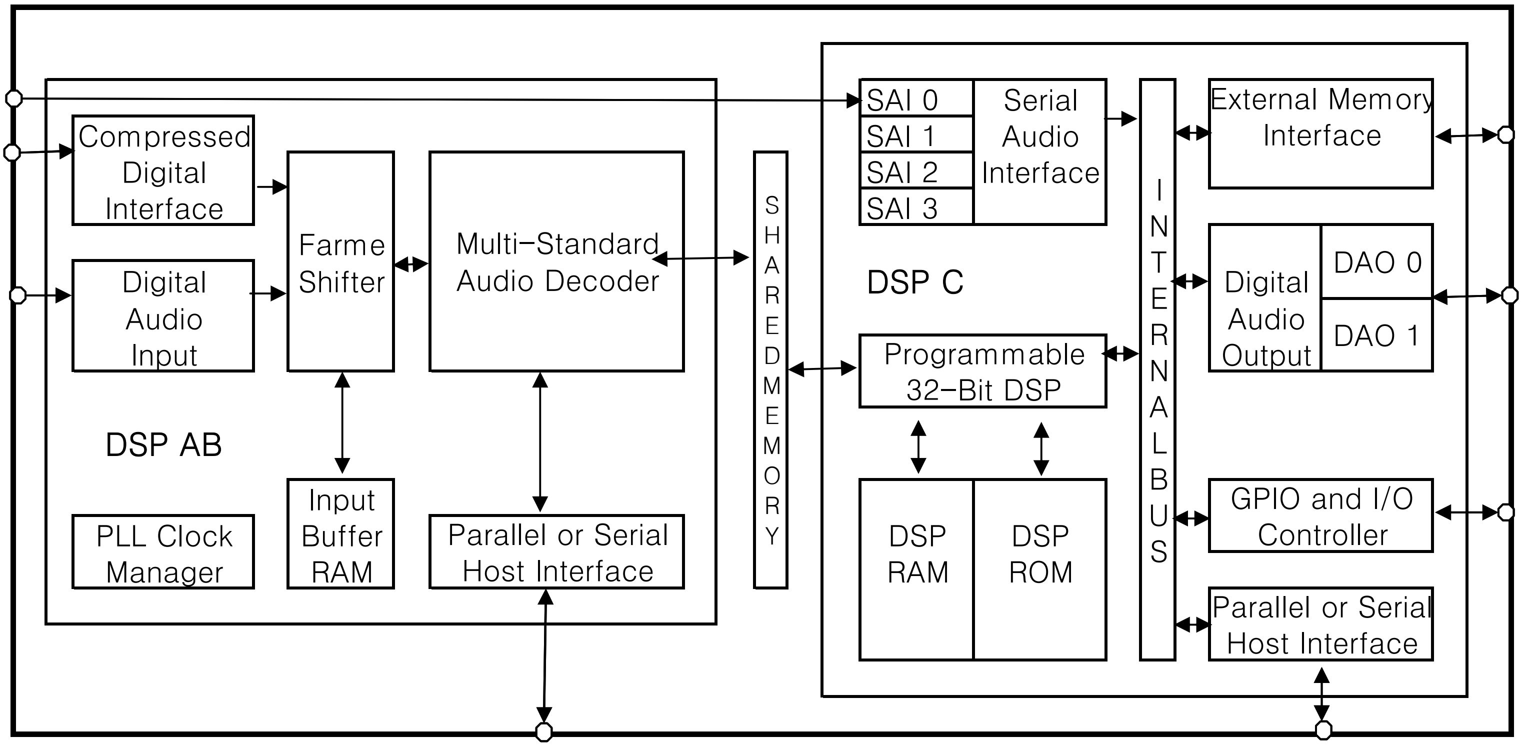

LRCLK0
AUDATA2
AUDATA3, XMT958A
HDATA3, GPIO3
105
SCLK0
HDATA4, GPIO4
AUDATA4, GPIO28
VSS2
VDD2
100
MCLK
SCLK1
HDATA5, GPIO5
HDATA6, GPIO6
HDATA7, GPIO7
95
AUDATA5, GPIO29
AUDATA6, GPIO30
AUDATA7, XMT958B, GPIO31
VSS1
VDD1
90
NC1
NC2
LRCLK1
SCLKN, GPIO22
LRCLKN, GPIO23
85
NC3
NC4
SDATAN0, GPIO24
SDATAN1, GPIO25
SDATAN2, GPIO26
80
SDATAN3, GPIO27
$\overline{\text{SD\_CAS}}$
$\overline{\text{SD\_RAS}}$
SD_ADDR3, EXTA3
75
SD_ADDR2, EXTA2
SD_ADDR1, EXTA1
SD_ADDR0, EXTA0
AUDATA1
AUDATA0
110
CMPCLK, FSCLKN2
HDATA2, GPIO2
VSS3
VDD3
HDATA1, GPIO1
115
HDATA0, GPIO0
CMPREQ, FLRCLKN2
CMPDAT, FSDATAN2
FLRCLKN1
$\overline{\text{WR}}$, $\overline{\text{DS}}$, GPIO10
120
$\overline{\text{RD}}$, R/$\overline{\text{W}}$, GPIO11
PLLVSS
FILT2
FILT1
PLLVDD
125
XTALO
CLKIN, XTALI
CLKSEL
$\overline{\text{CS}}$, GPIO9
A0, GPIO13
130
FSDATAN1
VDD4
VSS4
FSCLKN1, STCCLK2
$\overline{\text{SCS}}$
135
SCDIN
VSS5
VDD5
A1, GPIO12
SCDOUT, SCDIO
140
HINBSY, GPIO8
SCCLK
UHS2, $\overline{\text{CS\_OUT}}$, GPIO17
$\overline{\text{RESET}}$
144
SD_ADDR10, EXTA10
SD_BA, EXTA19
70
VDDSD1
VSSSD1
$\overline{\text{SD\_CS}}$
SD_ADDR4, EXTA4
SD_ADDR5, EXTA5
65
SD_ADDR6, EXTA6
SD_CLK_EN
SD_ADDR7, EXTA7
SD_ADDR8, EXTA8
SD_CLK_IN
60
SD_ADDR9, EXTA9
SD_CLK_OUT
VDDSD2
VSSSD2
SD_DATA8, EXTA11
55
SD_DATA9, EXTA12
SD_DATA10, EXTA13
SD_DATA11, EXTA14
SD_DATA12, EXTA15
VDDSD3
50
VSSSD3
SD_DATA13, EXTA16
NC5
SD_DATA14, EXTA17
SD_DATA15, EXTA18
45
SD_DQM1
SD_DATA7, EXTD7
SD_DATA6, EXTD6
VDDSD4
VSSSD4
40
SD_DATA5, EXTD5
SD_DQM0
SD_DATA4, EXTD4
SD_DATA3, EXTD3
1
UHS0, GPIO18
UHS1, GPIO19
$\overline{\text{INTREQ}}$
FA1, FSCDIN
5
GPIO20
FA0, FSCCLK
FHS2, FSCDIO, FSCDOUT
GPIO21
FDAT7
10
VDD6
VSS6
FHS0, $\overline{\text{FWR}}$, $\overline{\text{FDS}}$
FHS1, $\overline{\text{FRD}}$, FR/$\overline{\text{W}}$
FDAT6
15
$\overline{\text{FCS}}$
$\overline{\text{FINTREQ}}$
FDBCK
FDAT5
FDAT4
20
VDD7
VSS7
FDAT3
FDBDA
FDAT2
25
DBDA
DBCK
FDAT1
TEST
FDAT0
30
$\overline{\text{NV\_WE}}$, GPIO16
$\overline{\text{NV\_OE}}$, GPIO15
$\overline{\text{NV\_CS}}$, GPIO14
$\overline{\text{SD\_WE}}$
SD_DATA0, EXTD0
35
SD_DATA1, EXTD1
SD_DATA2, EXTD2

Figure 57. Pin Layout (144-Pin LQFP Package)

CS494003 BLOCK DIAGRAM


Compressed Digital Interface
Digital Audio Input
Farme Shifter
Multi-Standard Audio Decoder
DSP AB
PLL Clock Manager
Input Buffer RAM
Parallel or Serial Host Interface
SHARED MEMORY
SAI 0
SAI 1
SAI 2
SAI 3
Serial Audio Interface
DSP C
Programmable 32-Bit DSP
DSP RAM
DSP ROM
INTERNAL BUS
External Memory Interface
Digital Audio Output
DAO 0
DAO 1
GPIO and I/O Controller
Parallel or Serial Host Interface

12.3 Pin Definitions

FILT1 — Phase-Locked Loop Filter

Connects to an external filter for the on-chip phase-locked loop.

FILT2 — Phase Locked Loop Filter

Connects to an external filter for the on-chip phase-locked loop.

CLKIN, XTALI — External Clock Input/Crystal Oscillator Input

CS49400 clock input. This pin accepts an external clock input signal that is used to drive the internal core logic. When in internal clock mode (CLKSEL == VSS), this input is connected to the internal PLL from which all internal clocks are derived. When in external clock mode (CLKSEL == VDD), this input is connected to the DSP clock. Alternatively, a 12.288 mhZ crystal oscillator can be connected between XTALI and XTALO. *INPUT*

XTALO — Crystal Oscillator Output

Crystal oscillator output. *OUTPUT*

CLKSEL — DSP Clock Select

This pin selects the internal source clock. When CLKSEL is low, CLKIN is connected to the internal PLL from which all internal clocks are derived. When CLKSEL is high, the PLL is bypassed and the external clock directly drives all input logic. *INPUT*

FDAT7 — DSPAB Bidirectional Data Bus

FDAT6

FDAT5

FDAT4

FDAT3

FDAT2

FDAT1

FDAT0

In parallel host mode, these pins provide a bidirectional data bus to DSPAB. These pins have an internal pull-up.
BIDIRECTIONAL - Default: INPUT

FA0, FSCCLK — Host Parallel Address Bit Zero or Serial Control Port Clock

In parallel host mode, this pin serves as one of two address input pins used to select one of four parallel registers. In serial host mode, this pin serves as the serial control clock signal, specifically as the SPI clock input. *INPUT*

FA1, FSCDIN — Host Address Bit One or SPI Serial Control Data Input

In parallel host mode, this pin serves as one of two address input pins used to select one of four parallel registers. In SPI serial host mode, this pin serves as the data input. *INPUT*

FHS1, FRD, FR/W — Mode Select Bit 1 or Host Parallel Output Enable or Host Parallel R/W

DSPAB control port mode select bit 1. This bit is one of 3 control port select bits that are sampled on the rising edge of RESET to determine the control port mode of DSPAB. In Intel parallel host mode, this pin serves as the active-low data bus enable input. In Motorola parallel host mode, this pin serves as the read-high/write-low control input signal. In serial host mode, this pin can serve as the external memory active-low data-enable output signal. *BIDIRECTIONAL - Default: INPUT*

FHS0, FWR, FDS — Mode Select Bit 0 or Host Write Strobe or Host Data Strobe

DSPAB control port mode select bit 0. This bit is one of 3 control port select bits that are sampled on the rising edge of RESET to determine the control port mode of DSPAB. In Intel parallel host mode, this pin serves as the active-low data-write-input strobe. In Motorola parallel host mode, this pin serves as the active-low data-strobe-input signal. In serial host mode, this pin can serve as the external-memory active-low write-enable output signal. *BIDIRECTIONAL - Default: INPUT*

FCS — Host Parallel Chip Select, Host Serial SPI Chip Select

In parallel host mode, this pin serves as the active-low chip-select input signal. In serial host SPI mode, this pin is used as the active-low chip-select input signal. *INPUT*

FHS2, FSCDIO, FSCDOUT — Mode Select Bit 2 or Serial Control Port Data Input and Output, Parallel Port Type Select

DSPAB control port mode select bit 2. This bit is one of 3 control port select bits that are sampled on the rising edge of RESET to determine the control port mode of DSPAB. In SPI mode this pin serves as the data output pin. In parallel host mode, this pin is sampled at the rising edge of RESET to configure the parallel host mode as an Intel type bus or as a Motorola type bus. *BIDIRECTIONAL - Default: INPUT*

FINTREQ — Control Port Interrupt Request

Open-drain interrupt-request output. This pin is driven low to indicate that the DSP has outgoing control data that should be read by the host.
OPEN DRAIN I/O - Requires 3.3K Ohm Pull-Up

FSCLKN1, STCCLK2 — PCM Audio Input Bit Clock

Digital-audio bit clock input. FSCLKN1 operates asynchronously from all other DSPAB clocks. In master mode, FSCLKN1 is derived from DSPAB's internal clock generator. The active edge of FSCLKN1 can be programmed by the DSP.
BIDIRECTIONAL - Default: INPUT

FLRCLKN1 — PCM Audio Input Sample Rate Clock

Digital-audio frame clock input. FLRCLKN1 typically is run at the sampling frequency. FLRCLKN1 operates asynchronously from all other DSPAB clocks. The polarity of FLRCLKN1 for a particular subframe can be programmed by the DSP.

BIDIRECTIONAL - Default: INPUT

FSDATAN1 — PCM Audio Data Input One

Digital-audio data input that can accept from one compressed line or 2 channels of PCM data. FSDATAN1 can be sampled with either edge of FSCLKN1, depending on how FSCLKN1 has been configured. *INPUT*

CMPCLK, FSCLKN2 — PCM Audio Input Bit Clock

Digital-audio bit clock input. FSCLKN2 operates asynchronously from all other DSPAB clocks. The active edge of FSCLKN2 can be programmed by the DSP.

BIDIRECTIONAL - Default: INPUT

CMPDAT, FSDATAN2 — PCM Audio Data Input Number Two

Digital-audio data input that can accept either one compressed line or 2 channels of PCM data. FSDATAN2 can be sampled with either edge of FSCLKN2, depending on how FSCLKN2 has been configured.

BIDIRECTIONAL - Default: INPUT

FDBCK — Reserved

This pin is reserved and should be pulled up with an external 3.3k resistor. *INPUT*

FDBDA — Reserved

This pin is reserved and should be pulled up with an external 3.3k resistor.

BIDIRECTIONAL - Default: INPUT

PLLVDD — PLL Supply Voltage

2.5 V PLL supply.

PLLVSS — PLL Ground Voltage

PLL ground.

$\overline{\text{RESET}}$ — Master Reset Input

Asynchronous active-low master reset input. Reset should be low at power-up to initialize the DSP and to guarantee that the device is not active during initial power-on stabilization periods. At the rising edge of reset the host interface mode of DSPAB is selected contingent on the state of the FHS0, FHS1, and FHS2 pins. At the rising edge of reset the host interface mode of DSPC is selected contingent on the state of the UHSO, UHS1, and UHS2 pins. If reset is low all bidirectional pins are high-Z inputs. *INPUT*

TEST — Reserved

This should be tied low for normal operation. *INPUT*

MCLK — Audio Master Clock

Bidirectional master audio clock. As an output, MCLK provides a low jitter oversampling clock. MCLK supports all standard oversampling frequencies. BIDIRECTIONAL - Default: INPUT

SCLK0 — Audio Output Bit Clock

Bidirectional digital-audio output bit clock for AUDATA0, AUDATA1, AUDATA2, and AUDATA3. As an output, SCLK0 can provide 32 Fs, 64 Fs, 128 Fs, 256 Fs, or 512 Fs frequencies and is synchronous to MCLK. As an input, SCLK0 is independent of MCLK.

BIDIRECTIONAL - Default: INPUT

SCLK1 — Audio Output Bit Clock

Bidirectional digital-audio output bit clock for AUDATA4, AUDATA5, AUDATA6, and AUDATA7. As an output, SCLK1 can provide 32 Fs, 64 Fs, 128 Fs, 256 Fs, or 512 Fs frequencies and is synchronous to MCLK. As an input, SCLK1 is independent of MCLK.

BIDIRECTIONAL - Default: INPUT

LRCLK0 — Audio Output Sample Rate Clock

Bidirectional digital-audio output frame clock for AUDATA0, AUDATA1, AUDATA2, and AUDATA3. As an output, LRCLK0 can provide all standard output sample rates up to 192 kHz and is synchronous to MCLK. As an input, LRCLK0 is independent of MCLK.

BIDIRECTIONAL - Default: INPUT

LRCLK1 — Audio Output Sample Rate Clock

Bidirectional digital-audio output frame clock for AUDATA4, AUDATA5, AUDATA6, and AUDATA7. As an output, LRCLK1 can provide all standard output sample rates up to 192 kHz and is synchronous to MCLK. As an input, LRCLK1 is independent of MCLK.

BIDIRECTIONAL - Default: INPUT

AUDATA0 — Digital Audio Output 0

PCM digital-audio data output. *OUTPUT*

AUDATA1 — Digital Audio Output 1

PCM digital-audio data output. *OUTPUT*

AUDATA2 — Digital Audio Output 2

PCM digital-audio data output. *OUTPUT*

AUDATA3, XMT958A — Digital Audio Output 3, S/PDIF Transmitter

CMOS level output that outputs a biphase-mark encoded (S/PDIF) IEC60958 signal or digital audio data which is capable of carrying two channels of PCM digital audio. *OUTPUT*

AUDATA4, GPIO28 — Digital Audio Output 4, General Purpose I/O

PCM digital-audio data output. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. BIDIRECTIONAL - Default: OUTPUT

AUDATA5, GPIO29 — Digital Audio Output 5, General Purpose I/O

PCM digital-audio data output. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. *BIDIRECTIONAL - Default: OUTPUT*

AUDATA6, GPIO30 — Digital Audio Output 6, General Purpose I/O

PCM digital-audio data output. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. *BIDIRECTIONAL - Default: OUTPUT*

AUDATA7, XMT958B, GPIO31 — Digital Audio Output 7, S/PDIF Transmitter, General Purpose I/O

CMOS level output that contains a biphase-mark encoded (S/PDIF) IEC60958 signal or digital audio data which is capable of carrying two channels of PCM digital audio. This pin can also act as a general-purpose input or output that can be individually configured and controlled by DSPC. *BIDIRECTIONAL - Default: OUTPUT*

DBCK — Debug Clock

Must be tied high to 3.3k ohm resistor. *INPUT*

DBDA — Debug Data

Must be tied high to 3.3k ohm resistor. *BIDIRECTIONAL - Default: INPUT*

SLCKN, GPIO22 — PCM Audio Input Bit Clock, General Purpose I/O

Digital-audio bit clock that is an input. SCLKN operates asynchronously from all other DSPAB clocks. The active edge of SCLKN can be programmed by the DSP. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC.

BIDIRECTIONAL - Default: INPUT

LRCLKN, GPIO23 — PCM Audio Input Sample Rate Clock, General Purpose I/O

Digital-audio frame clock input. LRCLKN operates asynchronously from all other DSPAB clocks. The polarity of LRCLKN for a particular subframe can be programmed by the DSP. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. *BIDIRECTIONAL - Default: INPUT*

SDATAN0, GPIO24 — PCM Audio Input Data, General Purpose I/O

Digital-audio PCM data input. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. *BIDIRECTIONAL - Default: INPUT*

SDATAN1, GPIO25 — PCM Audio Input Data, General Purpose I/O

Digital-audio PCM data input. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. *BIDIRECTIONAL - Default: INPUT*

SDATAN2, GPIO26 — PCM Audio Input Data, General Purpose I/O

Digital-audio PCM data input. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. *BIDIRECTIONAL - Default: INPUT*

SDATAN3, GPIO27 — PCM Audio Input Data, General Purpose I/O

Digital-audio PCM data input. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. *BIDIRECTIONAL - Default: INPUT*

$\overline{\text{SCS}}$ — Host Serial SPI Chip Select

SPI mode active-low chip-select input signal. *INPUT*

SCCLK — Serial Control Port Clock

This pin serves as the serial SPI clock input. *INPUT*

SCDIN — SPI Serial Control Data Input

In SPI mode this pin serves as the data input pin. *INPUT*

SCDOUT, SCDIO — Serial Control Port Data Input and Output

In SPI mode this pin serves as the data output pin. *BIDIRECTIONAL - Default: OUTPUT in SPI mode*

$\overline{\text{INTREQ}}$ — Control Port Interrupt Request

Open-drain interrupt-request output. This pin is driven low to indicate that DSPC has outgoing control data and should be serviced by the host.
OPEN DRAIN I/O - Requires 3.3K Ohm Pull-Up

HDATA7, GPIO7 — DSPC Bidirectional Data Bus, General Purpose I/O

HDATA6, GPIO6

HDATA5, GPIO5

HDATA4, GPIO4

HDATA3, GPIO3

HDATA2, GPIO2

HDATA1, GPIO1

HDATA0, GPIO0

In parallel host mode, these pins provide a bidirectional data bus. These pins can also act as general purpose input or output pins that can be individually configured and controlled by DSPC. These pins have an internal pull-up. *BIDIRECTIONAL - Default: INPUT*

A0, GPIO13 — Host Parallel Address Bit 0, General Purpose I/O

In parallel host mode, this pin serves as the LS Bit of a two bit address input used to select one of four parallel registers. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. *BIDIRECTIONAL - Default: INPUT*

A1, GPIO12 — Host Address Bit 1, General Purpose I/O

In parallel host mode, this pin serves as the MS Bit of a two bit address input used to select one of four parallel registers. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. *BIDIRECTIONAL - Default: INPUT*

$\overline{\text{RD}}$, R/$\overline{\text{W}}$, GPIO11 — Host Parallel Output Enable, Host Parallel R/$\overline{\text{W}}$, General Purpose I/O

In Intel parallel host mode, this pin serves as the active-low data bus enable input. In Motorola parallel host mode, this pin serves as the read-high/write-low control input signal. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. This pin has an internal pull-up. *BIDIRECTIONAL - Default: INPUT*

$\overline{\text{WR}}$, $\overline{\text{DS}}$, GPIO10 — Host Write Strobe, Host Data Strobe, General Purpose I/O

In Intel parallel host mode, this pin serves as the active-low data bus enable input. In Motorola parallel host mode, this pin serves as the read-high/write-low control input signal. In serial host mode, this pin can serve as a general purpose input or output bit. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. This pin has an internal pull-up.
BIDIRECTIONAL - Default: INPUT

$\overline{\text{CS}}$, GPIO9 — Host Parallel Chip Select, General Purpose I/O

In parallel host mode, this pin serves as the active-low chip-select input signal. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. This pin has an internal pull-up. *BIDIRECTIONAL - Default: INPUT*

HINBSY, GPIO8 — Input Host Message Status, General Purpose I/O

This pin indicates that serial or parallel communication data written to the DSP has not been read yet. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. This pin has an internal pull-up. *BIDIRECTIONAL - Default: OUTPUT*

SD_DATA15, EXTA18 — SDRAM Data Bus, SRAM External Address Bus

SD_DATA14, EXTA17

SD_DATA13, EXTA16

SD_DATA12, EXTA15

SD_DATA11, EXTA14

SD_DATA10, EXTA13

SD_DATA9, EXTA12

SD_DATA8, EXTA11

SDRAM data bus 15:8. SRAM external address bus 18:11. *OUTPUT*

SD_DATA7, EXTD7 — SDRAM Data Bus, SRAM External Data Bus

SD_DATA6, EXTD6

SD_DATA5, EXTD5

SD_DATA4, EXTD4

SD_DATA3, EXTD3

SD_DATA2, EXTD2

SD_DATA1, EXTD1

SD_DATA0, EXTD0

SDRAM data bus 7:0. SRAM external data bus 7:0. *BIDIRECTIONAL - Default: INPUT*

SD_ADDR10, EXTA10 — SDRAM Address Bus, SRAM External Address Bus

SD_ADDR9, EXTA9

SD_ADDR8, EXTA8

SD_ADDR7, EXTA7

SD_ADDR6, EXTA6

SD_ADDR5, EXTA5

SD_ADDR4, EXTA4

SD_ADDR3, EXTA3

SD_ADDR2, EXTA2

SD_ADDR1, EXTA1

SD_ADDR0, EXTA0

SDRAM address bus 10:0. SRAM external address bus 10:0. *OUTPUT*

SD_CLK_OUT — SDRAM Clock Output

SDRAM clock output. *OUTPUT*

SD_CLK_IN — SDRAM Re-timing Clock Input

SDRAM re-timing clock input. *INPUT*

SD_CLK_EN — SDRAM Clock Enable

SDRAM clock enable. *OUTPUT*

SD_BA, EXTA19 — SDRAM Bank Address Select, SRAM External Address Bus

SDRAM bank address select. SRAM external address bus 19. *OUTPUT*

$\overline{\text{SD\_CS}}$ — SDRAM Chip Select

SDRAM chip select. *OUTPUT*

$\overline{\text{SD\_RAS}}$ — SDRAM Row Address Strobe

SDRAM row address strobe. *OUTPUT*

$\overline{\text{SD\_CAS}}$ — SDRAM Column Address Strobe

SDRAM column address strobe. *OUTPUT*

$\overline{\text{SD\_WE}}$ — SDRAM Write Enable

SDRAM write enable. *OUTPUT*

SD_DQM1 — SDRAM Data Mask 1

SDRAM data mask 1. *OUTPUT*

SD_DQM0 — SDRAM Data Mask 2

SDRAM data mask 0. *OUTPUT*

$\overline{\text{NV\_CS}}$, GPIO14 — SRAM Chip Select, General Purpose I/O

SRAM/Flash chip select. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. *BIDIRECTIONAL - Default: OUTPUT*

$\overline{\text{NV\_OE}}$, GPIO15 — SRAM Output Enable, General Purpose I/O

SRAM/Flash output enable. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. *BIDIRECTIONAL - Default: OUTPUT*

$\overline{\text{NV\_WE}}$, GPIO16 — SRAM Write Enable, General Purpose I/O

SRAM/Flash write enable. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. *BIDIRECTIONAL - Default: OUTPUT*

UHS2, CS_OUT, GPIO17 — Mode Select Bit 2, External Serial Memory Chip Select, General Purpose I/O

DSPC control port mode select bit 2. This pin is sampled at the rising edge of $\overline{\text{RESET}}$ and is one of three pins used to select the control port mode. In serial control port mode, this pin can serve as an output to provide the chip-select for a serial EEPROM. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC.

BIDIRECTIONAL - Default: INPUT

UHS0, GPIO18 — Mode Select Bit 0, General Purpose I/O

DSPC control port mode select bit 0. This pin is sampled at the rising edge of $\overline{\text{RESET}}$ and is one of three pins used to select the control port mode. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC.

BIDIRECTIONAL - Default: INPUT

UHS1, GPIO19 — Mode Select Bit 1, General Purpose I/O

DSPC control port mode select bit 1. This pin is sampled at the rising edge of $\overline{\text{RESET}}$ and is one of three pins used to select the control port mode. This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC.

BIDIRECTIONAL - Default: INPUT

GPIO20 — General Purpose I/O

This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC. This pin has an internal pull-up.

BIDIRECTIONAL - Default: INPUT

GPIO21 — General Purpose I/O

This pin can act as a general-purpose input or output that can be individually configured and controlled by DSPC.This pin has an internal pull-up.

BIDIRECTIONAL - Default: INPUT

VDD[7:1] — 2.5V Supply Voltage

2.5V supply voltage.

VSS — 2.5V Ground

2.5V ground.

CIRRUS LOGIC®

NC[5:1] — No Connect

Recommended tie to ground.

VDDSD[4:1] — 3.3V SDRAM/SRAM/EPROM Interface Supply

3.3V SDRAM/SRAM/EPROM supply.

VSSSD — 3.3V SDRAM/SRAM/EPROM Interface Ground

3.3V ground.

13. ORDERING INFORMATION

CS494002-CQ 144-pin, accommodates SRAM/SDRAM
CS494502-CQ 100-pin, external SRAM memory interface only (no SDRAM), no parallel-control ports, no FLASH programming.
(Contact the factory for the 100-pin package pin-out and dimension drawing)
Temp Range 0-70º C for both parts

CS4955 : IC23

A DIVISION OF CIRRUS LOGIC

CS4954
CS4955

NTSC/PAL Digital Video Encoder

Features

- Six DACs providing simultaneous composite, S-video, and RGB or Component YUV outputs
- Programmable DAC output currents for low imped-ance (37.5 Ω) and high impedance (150 Ω) loads.
- Multi-standard support for NTSC-M, NTSC-JAPAN, PAL (B, D, G, H, I, M, N, Combination N)
- ITU R.BT656 input mode supporting EAV/SAV codes and CCIR601 Master/Slave input modes
- Programmable HSYNC and VSYNC timing
- Multistandard Teletext (Europe, NABTS, WST) support
- VBI encoding support
- Wide-Screen Signaling (WSS) support, EIA-J CPX1204
- NTSC closed caption encoder with interrupt
- CS4955 supports Macrovision copy protection Version 7
- Host interface configurable for parallel or I^2C compatible operation
- On-chip voltage reference generator
- +3.3 V or +5 V operation, CMOS, low-power modes, tri-state DACs

Description

The CS4954/5 provides full conversion from digital video formats YCbCr or YUV into NTSC and PAL Composite, Y/C (S-video) and RGB, or YUV analog video. Input formats can be 27 MHz 8-bit YUV, 8-bit YCbCr, or ITU R.BT656 with support for EAV/SAV codes. Video output can be formatted to be compatible with NTSC-M, NTSC-J, PAL-B,D,G,H,I,M,N, and Combination N systems. Closed Caption is supported in NTSC. Teletext is supported for NTSC and PAL.

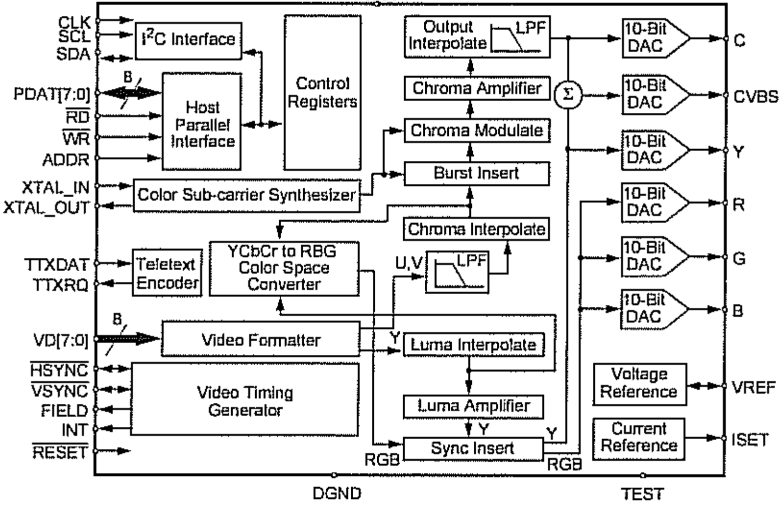
Six 10-bit DACs provide two channels for an S-Video output port, one or two composite video outputs, and three RGB or YUV outputs. Two-times oversampling reduces the output filter requirements and guarantees no DAC-related modulation components within the specified bandwidth of any of the supported video standards.

Parallel or high-speed I^2C compatible control interfaces are provided for flexibility in system design. The parallel interface doubles as a general purpose I/O port when the CS4954/5 is in I^2C mode to help conserve valuable board area.

ORDERING INFORMATION

CS4954-CQ	48-pin TQFP
CS4955-CQ	48-pin TQFP

BLOCK DIAGRAM


VAA
CLK
SCL
SDA
I²C Interface
PDAT[7:0]
8
RD
WR
ADDR
Host Parallel Interface
Control Registers
Output Interpolate
LPF
Chroma Amplifier
Σ
Chroma Modulate
Burst Insert
XTAL_IN
XTAL_OUT
Color Sub-carrier Synthesizer
Chroma Interpolate
TTXDAT
TTXRQ
Teletext Encoder
YCbCr to RBG Color Space Converter
U,V
LPF
VD[7:0]
8
Video Formatter
Y
Luma Interpolate
HSYNC
VSYNC
FIELD
INT
RESET
Video Timing Generator
Luma Amplifier
Y
Sync Insert
RGB
Y
RGB
10-Bit DAC
C
10-Bit DAC
CVBS
10-Bit DAC
Y
10-Bit DAC
R
10-Bit DAC
G
10-Bit DAC
B
Voltage Reference
VREF
Current Reference
ISET
DGND
TEST

Preliminary Product Information

This document contains information for a new product.
Cirrus Logic reserves the right to modify this product without notice.

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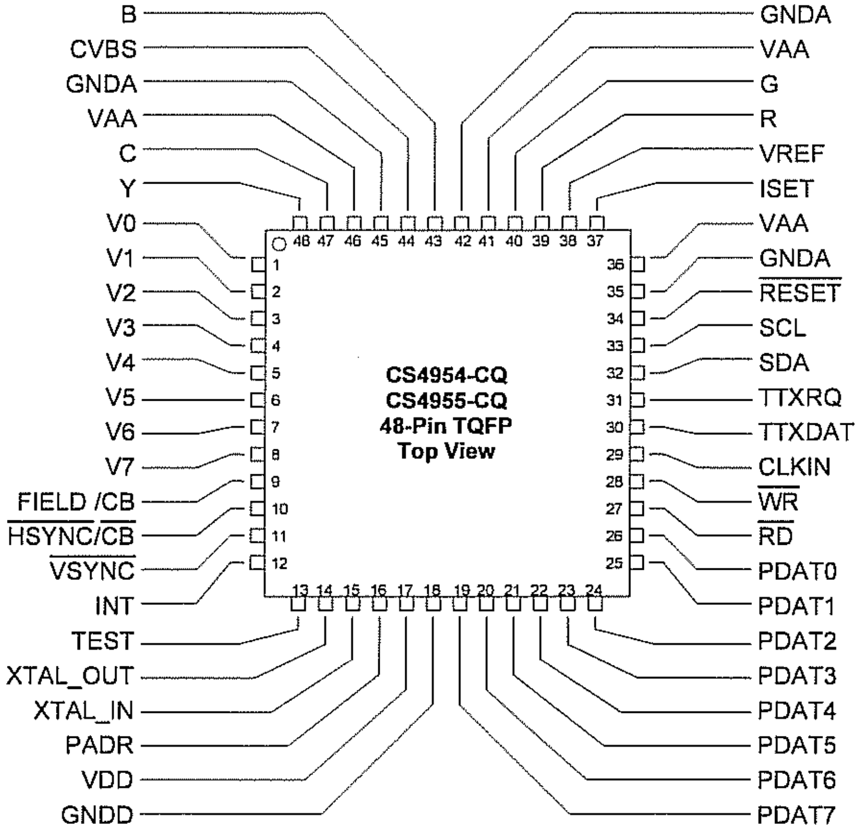
APR '99
DS278PP4

Pin Name	Pin Number	Type	Description
V [7:0]	8, 7, 6, 5, 4, 3, 2, 1	IN	Digital video data inputs
CLK	29	IN	27 MHz input clock
PADDR	16	IN	Address enable line
XTAL_IN	15	IN	subcarrier crystal input
XTAL_OUT	14	OUT	subcarrier crystal output
$\overline{\text{HSYNC}}$/$\overline{\text{CB}}$	10	I/O	Active low horizontal sync, or composite blank signal
$\overline{\text{VSYNC}}$	11	I/O	Active low vertical sync.
FIELD/CB	9	OUT	Video field ID. Selectable polarity or composite blank
$\overline{\text{RD}}$	27	IN	Host parallel port read strobe, active low
$\overline{\text{WR}}$	28	IN	Host parallel port write strobe, active low
PDAT [7:0]	19, 20, 21, 22, 23, 24, 25, 26	I/O	Host parallel port/ general purpose I/O
SDA	32	I/O	I^{2}C data
SCL	33	IN	I^{2}C clock input
CVBS	44	CURRENT	Composite video output
Y	48	CURRENT	Luminance analog output
C	47	CURRENT	Chrominance analog output
R	39	CURRENT	Red analog output
G	40	CURRENT	Green analog output
B	43	CURRENT	Blue analog output
VREF	38	I/O	Internal voltage reference output or external reference input
ISET	37	CURRENT	DAC current set
TTXDAT	30	IN	Teletext data input
TTXRQ	31	OUT	Teletext request output
INT	12	OUT	Interrupt output, active high
$\overline{\text{RESET}}$	34	IN	Active low master RESET
TEST	13	IN	TEST pin. Ground for normal operation
VAA	36, 41, 46	PS	+ 5 V or + 3.3 V supply (must be same as VDD)
GNDD	18	PS	Ground
VDD	17	PS	+5 V or 3.3 V supply (must be same as VAA)
GNDA	35, 42, 45	PS	Ground

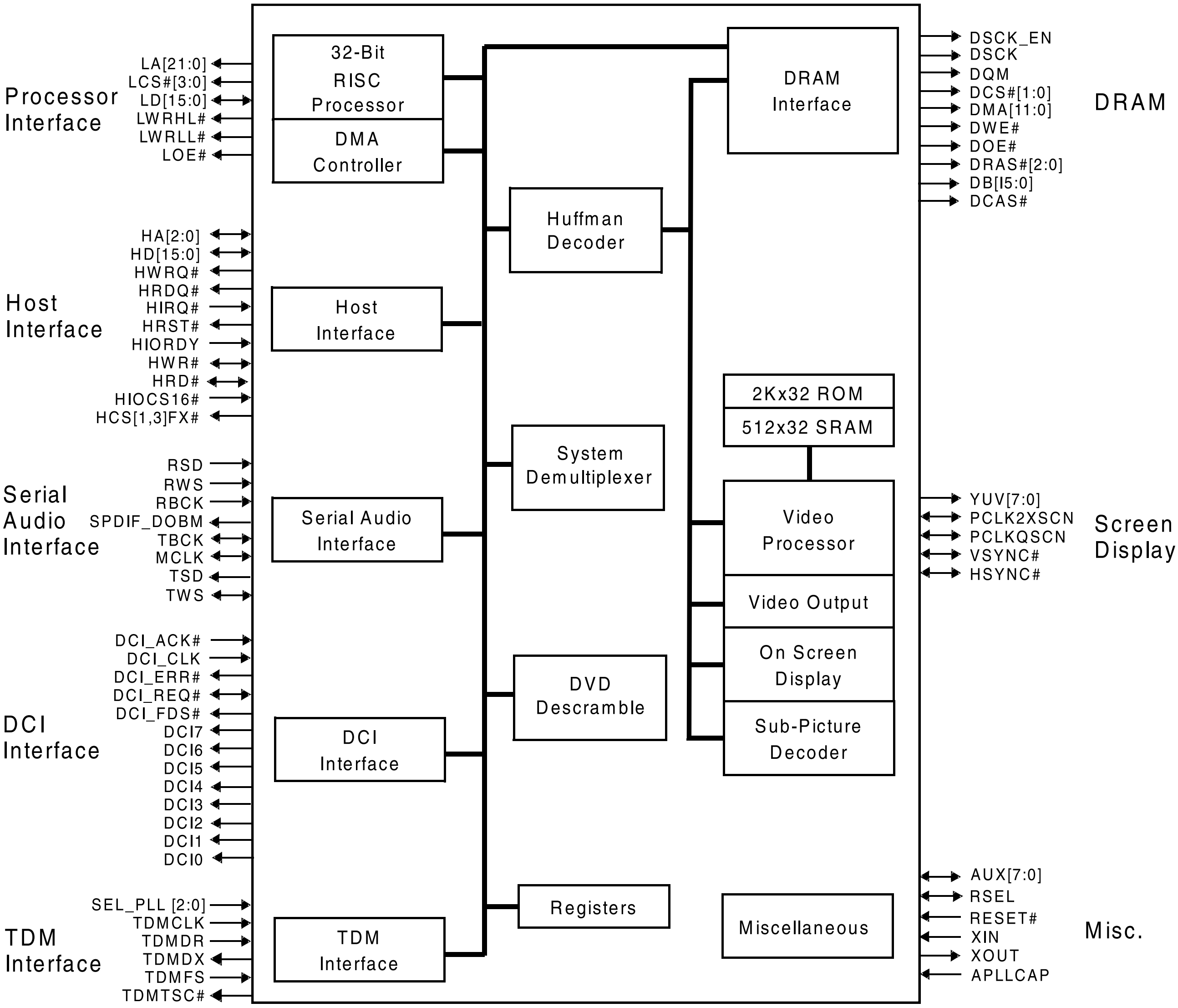
Table 10. Device Pin Descriptions

10. PIN DESCRIPTION

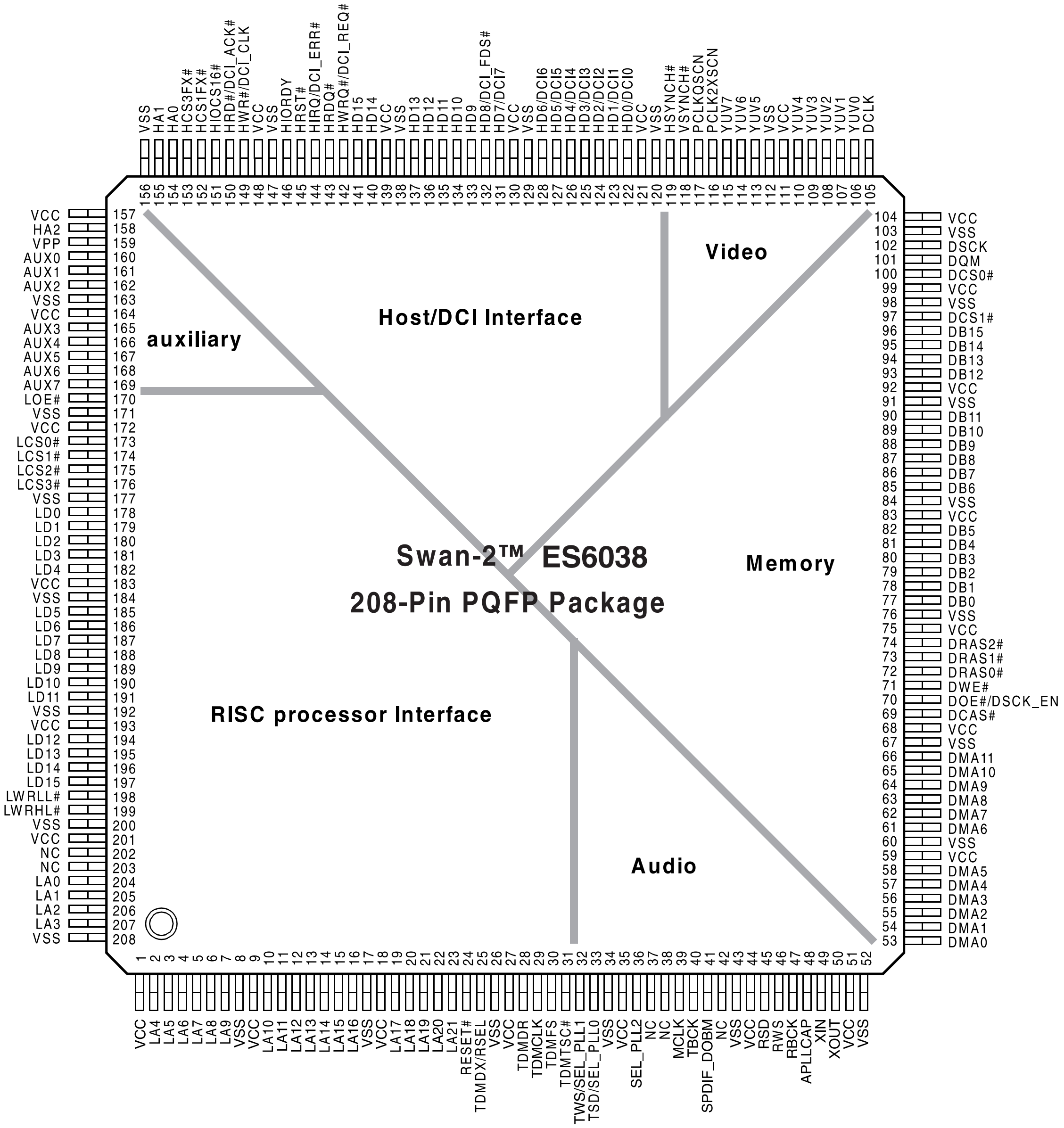

CS4954-CQ
CS4955-CQ
48-Pin TQFP
Top View
B
CVBS
GNDA
VAA
C
Y
V0
V1
V2
V3
V4
V5
V6
V7
FIELD /CB
$\overline{\text{HSYNC}}$/$\overline{\text{CB}}$
$\overline{\text{VSYNC}}$
INT
TEST
XTAL_OUT
XTAL_IN
PADR
VDD
GNDD
GNDA
VAA
G
R
VREF
ISET
VAA
GNDA
$\overline{\text{RESET}}$
SCL
SDA
TTXRQ
TTXDAT
CLKIN
$\overline{\text{WR}}$
$\overline{\text{RD}}$
PDAT0
PDAT1
PDAT2
PDAT3
PDAT4
PDAT5
PDAT6
PDAT7
1 2 3 4 5 6 7 8 9 10 11 12
13 14 15 16 17 18 19 20 21 22 23 24
25 26 27 28 29 30 31 32 33 34 35 36
37 38 39 40 41 42 43 44 45 46 47 48

■ SWAN-2™ (ES6038 : IC11) FUNCTIONAL DESCRIPTION

The following figure shows the internal block diagram for the Swan-2™ ES4318.


Processor Interface
LA[21:0]
LCS#[3:0]
LD[15:0]
LWRHL#
LWRLL#
LOE#
Host Interface
HA[2:0]
HD[15:0]
HWRQ#
HRDQ#
HIRQ#
HRST#
HIORDY
HWR#
HRD#
HIOCS16#
HCS[1,3]FX#
Serial Audio Interface
RSD
RWS
RBCK
SPDIF_DOBM
TBCK
MCLK
TSD
TWS
DCI Interface
DCI_ACK#
DCI_CLK
DCI_ERR#
DCI_REQ#
DCI_FDS#
DCI7
DCI6
DCI5
DCI4
DCI3
DCI2
DCI1
DCI0
TDM Interface
SEL_PLL [2:0]
TDMCLK
TDMDR
TDMDX
TDMFS
TDMTSC#
32-Bit RISC Processor
DMA Controller
Host Interface
Serial Audio Interface
DCI Interface
TDM Interface
Huffman Decoder
System Demultiplexer
DVD Descramble
Registers
DRAM Interface
2Kx32 ROM
512x32 SRAM
Video Processor
Video Output
On Screen Display
Sub-Picture Decoder
Miscellaneous
DSCK_EN
DSCK
DQM
DCS#[1:0]
DMA[11:0]
DWE#
DOE#
DRAS#[2:0]
DB[I5:0]
DCAS#
DRAM
YUV[7:0]
PCLK2XSCN
PCLKQSCN
VSYNC#
HSYNC#
Screen Display
AUX[7:0]
RSEL
RESET#
XIN
XOUT
APLLCAP
Misc.

PIN GEOGRAPHY

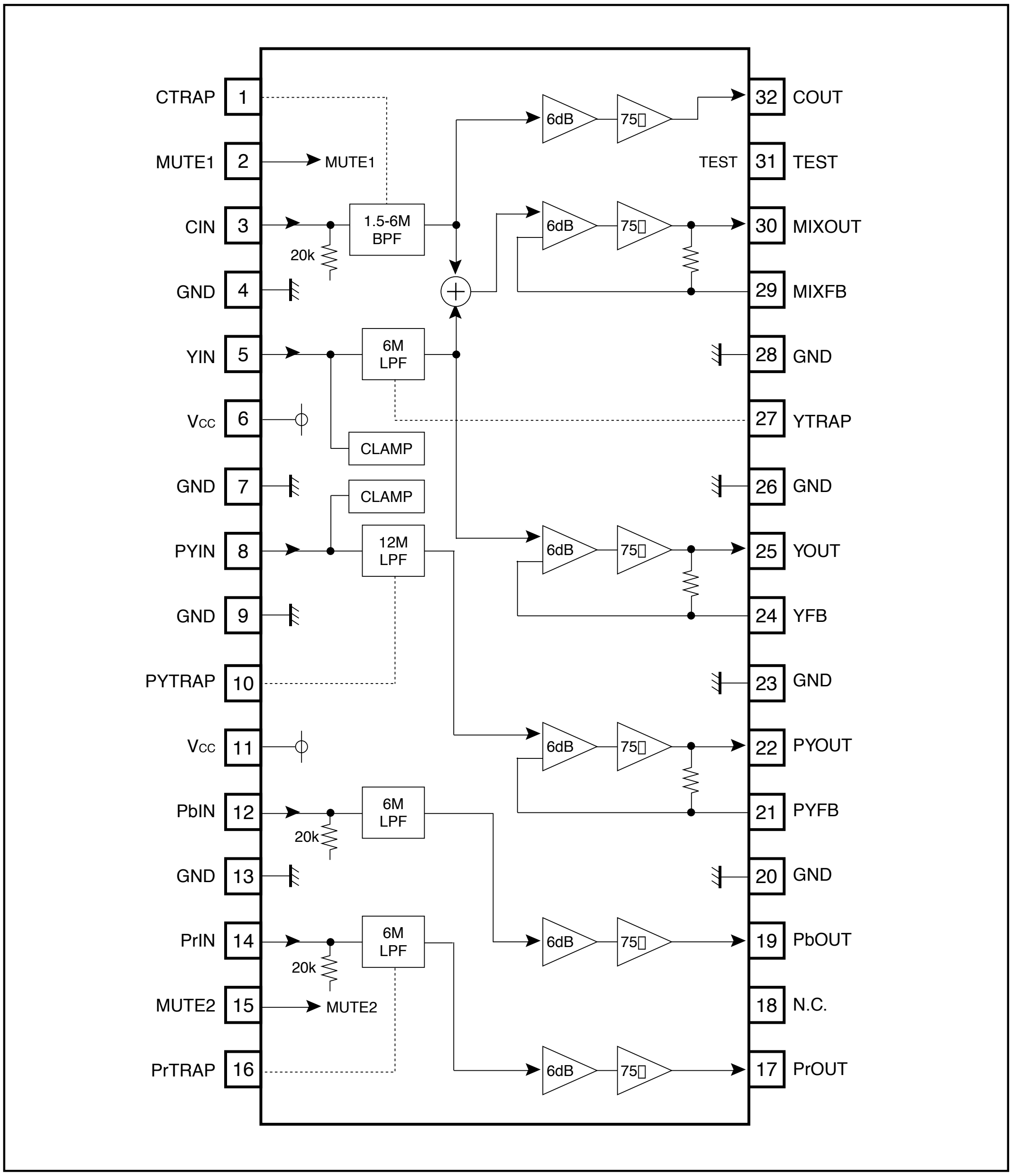

Swan-2™ ES6038
208-Pin PQFP Package
Host/DCI Interface
Video
auxiliary
Memory
RISC processor Interface
Audio
1 VCC
2 LA4
3 LA5
4 LA6
5 LA7
6 LA8
7 LA9
8 VSS
9 VCC
10 LA10
11 LA11
12 LA12
13 LA13
14 LA14
15 LA15
16 LA16
17 VSS
18 VCC
19 LA17
20 LA18
21 LA19
22 LA20
23 LA21
24 RESET#
25 TDMDX/RSEL
26 VSS
27 VCC
28 TDMDR
29 TDMCLK
30 TDMFS
31 TDMTSC#
32 TWS/SEL_PLL1
33 TSD/SEL_PLL0
34 VSS
35 VCC
36 SEL_PLL2
37 NC
38 NC
39 MCLK
40 TBCK
41 SPDIF_DOBM
42 NC
43 VSS
44 VCC
45 RSD
46 RWS
47 RBCK
48 APLLCAP
49 XIN
50 XOUT
51 VCC
52 VSS
53 DMA0
54 DMA1
55 DMA2
56 DMA3
57 DMA4
58 DMA5
59 VCC
60 VSS
61 DMA6
62 DMA7
63 DMA8
64 DMA9
65 DMA10
66 DMA11
67 VSS
68 VCC
69 DCAS#
70 DOE#/DSCK_EN
71 DWE#
72 DRAS0#
73 DRAS1#
74 DRAS2#
75 VCC
76 VSS
77 DB0
78 DB1
79 DB2
80 DB3
81 DB4
82 DB5
83 VCC
84 VSS
85 DB6
86 DB7
87 DB8
88 DB9
89 DB10
90 DB11
91 VSS
92 VCC
93 DB12
94 DB13
95 DB14
96 DB15
97 DCS1#
98 VSS
99 VCC
100 DCS0#
101 DQM
102 DSCK
103 VSS
104 VCC
105 DCLK
106 YUV0
107 YUV1
108 YUV2
109 YUV3
110 YUV4
111 VCC
112 VSS
113 YUV5
114 YUV6
115 YUV7
116 PCLK2XSCN
117 PCLKQSCN
118 VSYNCH#
119 HSYNCH#
120 VSS
121 VCC
122 HD0/DCI0
123 HD1/DCI1
124 HD2/DCI2
125 HD3/DCI3
126 HD4/DCI4
127 HD5/DCI5
128 HD6/DCI6
129 VSS
130 VCC
131 HD7/DCI7
132 HD8/DCI_FDS#
133 HD9
134 HD10
135 HD11
136 HD12
137 HD13
138 VSS
139 VCC
140 HD14
141 HD15
142 HWRQ#/DCI_REQ#
143 HRDQ#
144 HIRQ/DCI_ERR#
145 HRST#
146 HIORDY
147 VSS
148 VCC
149 HWR#/DCI_CLK
150 HRD#/DCI_ACK#
151 HIOCS16#
152 HCS1FX#
153 HCS3FX#
154 HA0
155 HA1
156 VSS
157 VCC
158 HA2
159 VPP
160 AUX0
161 AUX1
162 AUX2
163 VSS
164 VCC
165 AUX3
166 AUX4
167 AUX5
168 AUX6
169 AUX7
170 LOE#
171 VSS
172 VCC
173 LCS0#
174 LCS1#
175 LCS2#
176 LCS3#
177 VSS
178 LD0
179 LD1
180 LD2
181 LD3
182 LD4
183 VCC
184 VSS
185 LD5
186 LD6
187 LD7
188 LD8
189 LD9
190 LD10
191 LD11
192 VSS
193 VCC
194 LD12
195 LD13
196 LD14
197 LD15
198 LWRLL#
199 LWRHL#
200 VSS
201 VCC
202 NC
203 NC
204 LA0
205 LA1
206 LA2
207 LA3
208 VSS

SWAN-2™ ES6038 PIN DESCRIPTION

Name	Number	I/O	Definition
VCC	1, 9, 18, 27, 35, 44, 51, 59, 68, 75, 83, 92, 99, 104, 111, 121, 130, 139, 148, 157, 164, 172, 183, 193, 201	I	3.65 V ± 150 mv.
LA[21:0]	23:19,16:10,7:2,207:204	O	Device address output.
VSS	8,17,26,34,43,52,60,67,76,84,91,98,103,112,120,129,138,147,156,163,171,177,184,192,200,208	I	Ground.
RESET#	24	I	Reset input, active low.
TDMDX	25	O	TDM transmit data.
RSEL		I	ROM Select **RSEL** **Selection** 0 16-bit OM R 1 8-bit ROM
TDMDR	28	I	TDM receive data.
TDMCLK	29	I	TDM clock input.
TDMFS	30	I	TDM frame synch.
TDMTSC#	31	O	TDM output enable, active low.
TWS	32	O	Audio transmit frame sync.
SEL_PLL1		I	Select PLL1.
TSD	33	O	Audio transmit serial data port.
SEL_PLL0		I	Select PLL0. **SEL_PLL2** **SEL_PLL0** **Clock Output** 0 0 2.5 x DCLK 0 1 3 DCLK x 1 0 3.5 x DCLK 1 1 4 DCLK x
SEL_PLL2	36		Select PLL2. See the table for pin number 33.
MCLK	39	I/O	Audio master clock for audio DAC.
TBCK	40	I/O	Audio transmit bit clock.
SPDIF_DOBM	41	O	S/PDIF (IEC958) Format Output.
RSD	45	I	Audio receive serial data.
RWS	46	I	Audio receive frame synch.
RBCK	47	I	Audio receive bit clock.
APLLCAP	48	I	Analog PLL Capacitor.
XIN	49	I	Crystal input.
XOUT	50	O	Crystal output.
DMA[11:0]	66:61,58:53	O	DRAM address bus.
DCAS#	69	O	Column address strobe, active low.
DOE#	70	O	Output enable, active low.
DSCK_EN		I	Clock Enable, active low.
DWE#	71	O	DRAM write enable, active low.
DRAS[2:0]#	74:72	O	Row address strobe, active low.
DB[15:0]	96:93,90:85,82:77	I/O	DRAM data bus.
DCS[1:0]#	97,100	O	SDRAM chip select [1:0], active low.
DQM	101	O	Data input/output mask.
DSCK	102	O	Clock to SDRAM.
DCLK	105	I	Clock Input (27 MHz)
YUV[7:0]	115:113,110:106	O	8-bit YUV output.
PCLK2XSCN	116	I/O	2X pixel clock.
PCLKQSCN	117	I/O	Pixel clock.
VSYNCH#	118	I/O	Vertical synch for screen video interface, programmable for rising or falling edge, active low.
HSYNCH#	119	I/O	Horizontal sync for screen video interface, programmable for rising or falling edge, active low.
HD[15:0]	141:140,137:131,128:122	O	Host data bus
HCS1FX#	152	O	Host select 1.
HCS3FX#	153	O	Host select 3.
HIOCS16#	151	I	Device 16-bit data transfer.
HA[2:0]	158, 155:154	I/O	Host address bus.
VPP	159	I	Peripheral protection voltage. See AppNote 2.
HWR#/DCI_ACK#	149	I,I	Host write/DCI Interface Acknowledge Signal, active low.
HRD#/DCI_CLK	150	I,I	Host read/DCI Interface Clock.
HD[15:0]	141:140,137:131,128:122	I/O	Host data bus.
HWRQ#	142	O	Host write request.
HRDQ#	143	O	Host read request.
HIRQ	144	I/O	Host interrupt.
HRST#	145	O	Host reset.
HIORDY	146	I	Host I/O ready.
HWR#	149	O	Host write request.
AUX[7:0]	169:165,162:160	I/O	Auxiliary ports.
LOE#	170	O	Device output enable, active low.
LCS[3:0]#	176:173	O	Chip select [3:0], active low.
LD[15:0]	197:194, 191:185, 182:178	I/O	Device data bus.
LWRLL#	198	O	Device write enable, active low.
LWRHL#	199	O	Device write enable, active low.
NC	37,38,42,203:202		No Connect pins. Leave open.

6 CH VIDEO DRIVER

BH7862FS


CTRAP 1
MUTE1 2
MUTE1
CIN 3
20k
1.5-6M BPF
GND 4
YIN 5
6M LPF
Vcc 6
CLAMP
GND 7
CLAMP
PYIN 8
12M LPF
GND 9
PYTRAP 10
Vcc 11
PbIN 12
20k
6M LPF
GND 13
PrIN 14
20k
6M LPF
MUTE2 15
MUTE2
PrTRAP 16
6dB
75Ω
32 COUT
TEST
31 TEST
30 MIXOUT
29 MIXFB
28 GND
27 YTRAP
26 GND
25 YOUT
24 YFB
23 GND
22 PYOUT
21 PYFB
20 GND
19 PbOUT
18 N.C.
17 PrOUT

SGS-THOMSON MICROELECTRONICS

HCF4053B : IC74

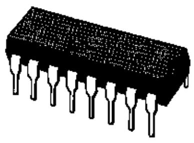
ANALOG MULTIPLEXERS-DEMULTIPLEXERS

4051B - SINGLE 8-CHANNEL

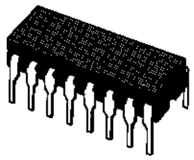
4052B - DIFFERENTIAL 4-CHANNEL

4053B - TRIPLE 2-CHANNEL

- QUIESCENT CURRENT SPECIFIED TO 20V FOR HCC DEVICE
- LOW "ON" RESISTANCE : 125Ω (typ.) OVER 15V p.p. SIGNAL-INPUT RANGE FOR V_{DD}-V_{EE} = 15V
- HIGH "OFF" RESISTANCE : CHANNEL LEAKAGE ± 100pA (typ.) $V_{DD} - V_{EE}$ = 18V
- BINARY ADDRESS DECODING ON CHIP
- VERY LOW QUIESCENT POWER DISSIPATION UNDER ALL DIGITAL CONTROL INPUT AND SUPPLY CONDITIONS : 0.2 μW (typ.), $V_{DD} - V_{SS} = V_{DD} - V_{EE}$ = 10V
- MATCHED SWITCH CHARACTERISTICS : R_{ON} = 5Ω (typ.) for $V_{DD} - V_{EE}$ = 15V
- WIDE RANGE OF DIGITAL AND ANALOG SIGNAL LEVELS : DIGITAL 3 TO 20V, ANALOG TO 20V p.p.
- 5V, 10V, AND 15V PARAMETRIC RATINGS
- INPUT CURRENT OF 100mA AT 18V AND 25°C FOR HCC DEVICE
- 100% TESTED FOR QUIESCENT CURRENT
- MEETS ALL REQUIREMENTS OF JEDEC TENTATIVE STANDARD N° 13A, "STANDARD SPECIFICATIONS FOR DESCRIPTION OF "B" SERIES CMOS DEVICES"

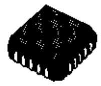


EY
(Plastic Package)



F
(Ceramic Frit Seal Package)

M1
(Micro Package)



C1
(Plastic Chip Carrier)

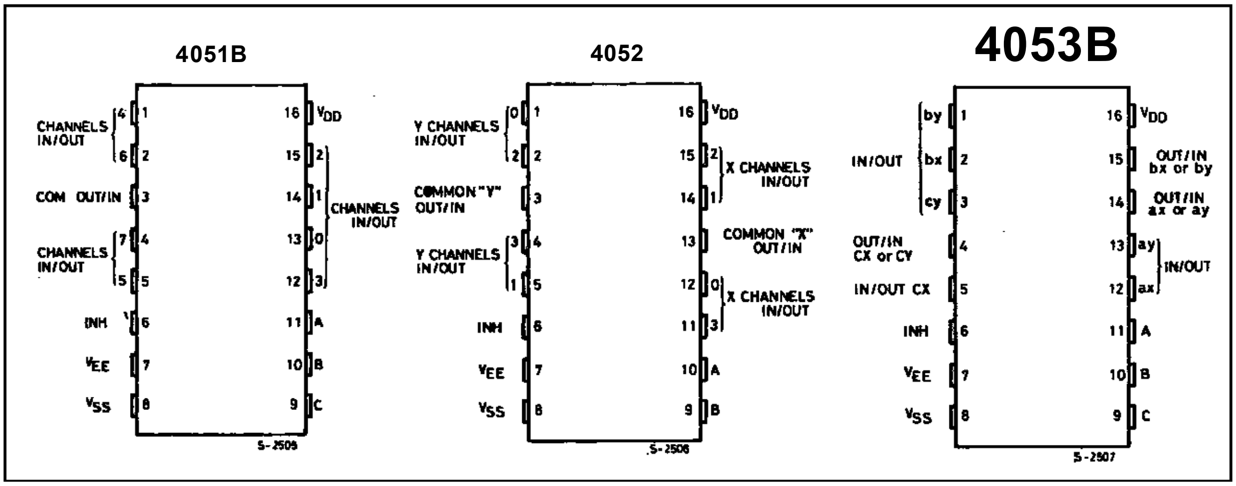
ORDER CODES :

HCC40XXBF	HCF40XXBM1
HCF40XXBEY	HCF40XXBC1

DESCRIPTION

The **HCC 4051B, 4052B** and **4053B** (extended temperature range) and **HCF4051B, 4052B** and **4053B** (intermediate temperature range) are monolithic integrated circuits, available in 16-lead dual in-line plastic or ceramic package and plastic micropackage. **HCC/HCF4051B, HCC/HCF4052B**, and **HCC/HCF4053B** analog multiplexers/demultiplexers are digitally controlled analog switches having low ON impedance and very low OFF leakage

PIN CONNECTIONS


4051B
CHANNELS IN/OUT
4 1
6 2
COM OUT/IN 3
CHANNELS IN/OUT
7 4
5 5
INH 6
VEE 7
VSS 8
16 VDD
15 2
14 1
13 0
12 3
CHANNELS IN/OUT
11 A
10 B
9 C
S-2505
4052
Y CHANNELS IN/OUT
0 1
2 2
COMMON "Y" OUT/IN 3
Y CHANNELS IN/OUT
3 4
1 5
INH 6
VEE 7
VSS 8
16 VDD
15 2
14 1
X CHANNELS IN/OUT
13 COMMON "X" OUT/IN
12 0
11 3
X CHANNELS IN/OUT
10 A
9 B
S-2506
4053B
IN/OUT
by 1
bx 2
cy 3
OUT/IN CX or CY 4
IN/OUT CX 5
INH 6
VEE 7
VSS 8
16 VDD
15 OUT/IN bx or by
14 OUT/IN ax or ay
13 ay
12 ax
IN/OUT
11 A
10 B
9 C
S-2507

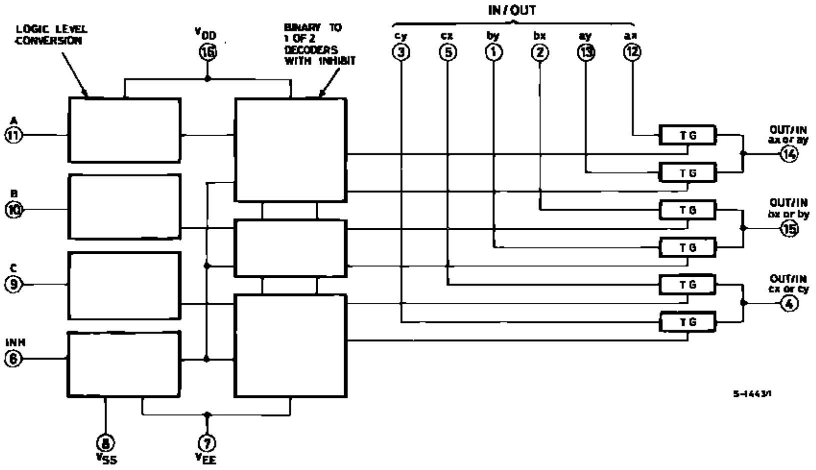
June 1989

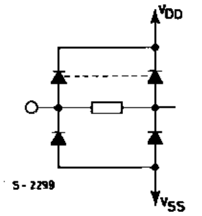
FUNCTIONAL DIAGRAMS AND TRUTH TABLES (continued)

4053

Inhibit	A or B or C	
0	0	ax or bx or cx
0	1	ay or by or cy
1	X	None

X = Don’t care.


LOGIC LEVEL CONVERSION
V_{DD}
16
BINARY TO 1 OF 2 DECODERS WITH INHIBIT
IN/OUT
cy 3
cx 5
by 1
bx 2
ay 13
ax 12
A 11
B 10
C 9
INH 6
TG
OUT/IN ax or ay 14
OUT/IN bx or by 15
OUT/IN cx or cy 4
8 V_{SS}
7 V_{EE}
5-14431


V_{DD}
S-2299
V_{SS}

ALL INPUTS ARE PROTECTED BY COS/MOS PROTECTION NETWORK

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{DD}*	Supply Voltage : **HCC** Types **HCF** Types	– 0.5 to + 20 – 0.5 to + 18	V V
V_i	Input Voltage	– 0.5 to V_{DD} + 0.5	V
I_I	DC Input Current (any one input)	± 10	mA
P_{tot}	Total Power Dissipation (per package) Dissipation per Output Transistor for T_{op} = Full Package-temperature Range	200 100	mW mW
T_{op}	Operating Temperature : **HCC** Types **HCF** Types	– 55 to + 125 – 40 to + 85	°C °C
T_{stg}	Storage Temperature	– 65 to + 150	°C

Stresses above those listed under ”Absolute Maximum Ratings” may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those indicated in the operational sections of this specification is not implied. Exposure to absolute maximum rating conditions for external periods may affect device reliability.

* All voltage values are referred to V_{SS} pin voltage.

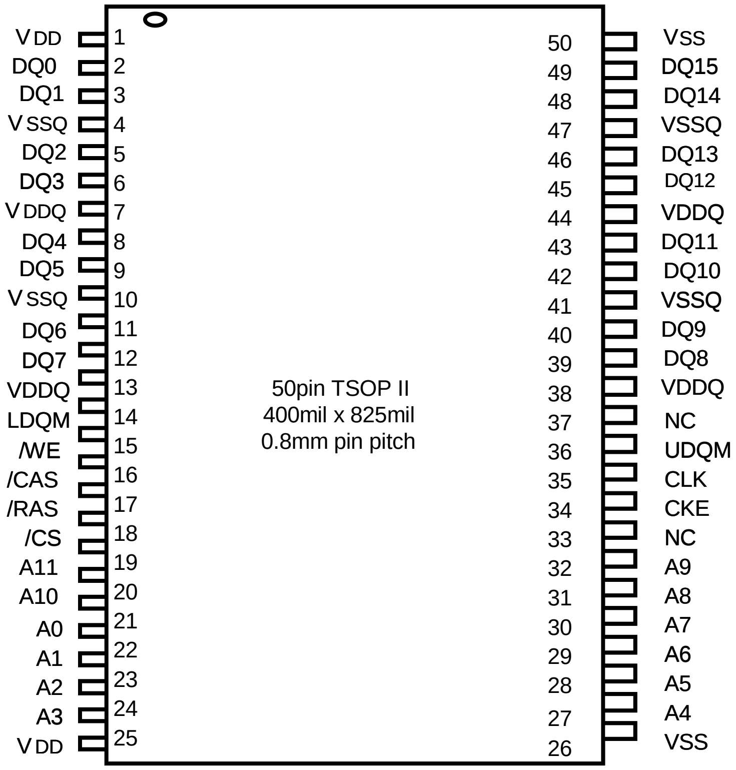
RECOMMENDED OPERATING CONDITIONS

Symbol	Parameter	Value	Unit
V_{DD}	Supply Voltage : **HCC** Types **HCF** Types	3 to 18 3 to 15	V V
V_I	Input Voltage	0 to V_{DD}	V
T_{op}	Operating Temperature : **HCC** Types **HCF** Types	– 55 to + 125 – 40 to + 85	°C °C

IC:54

HY57V161610ET-7

PIN CONFIGURATION

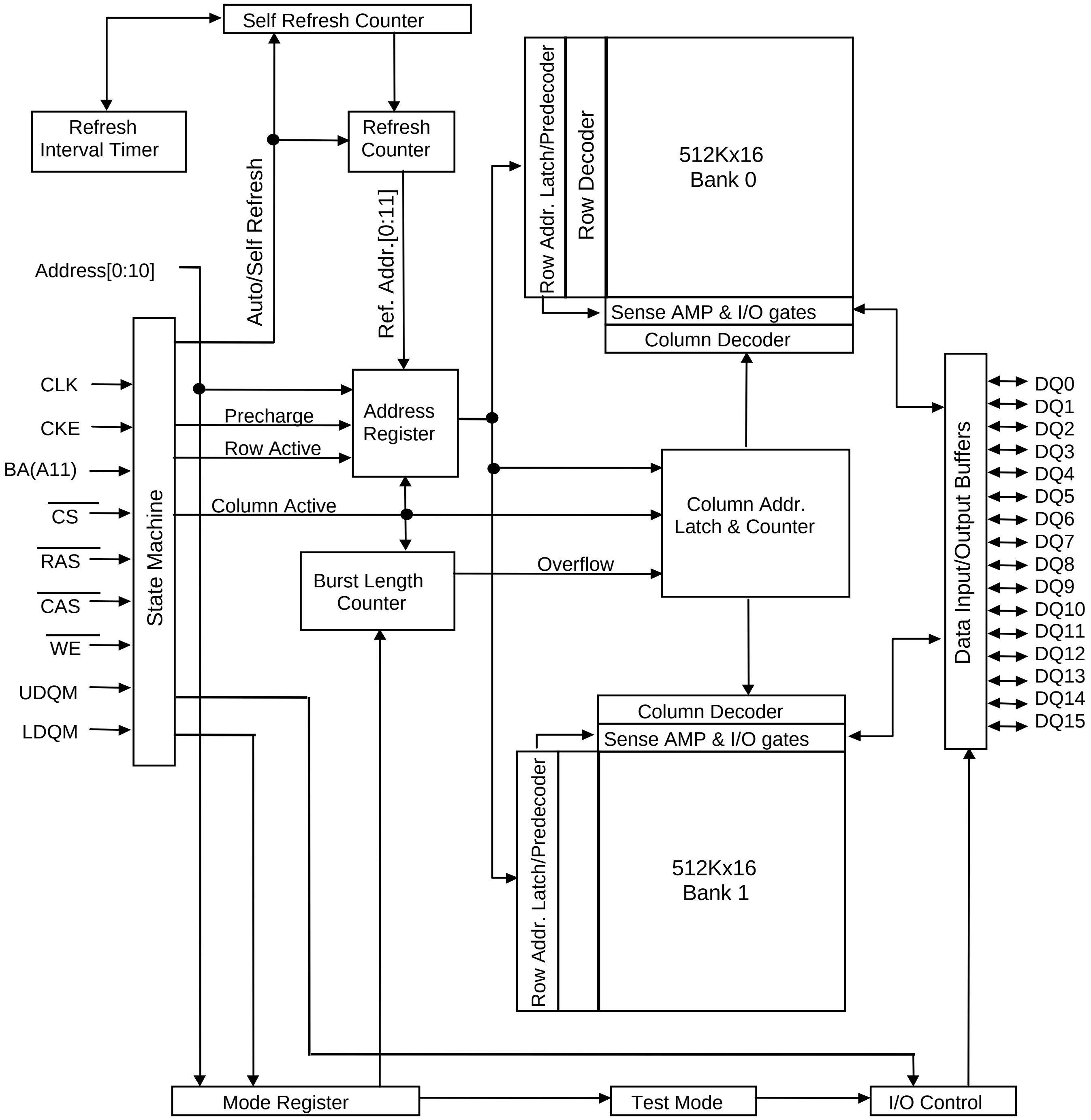

VDD 1
DQ0 2
DQ1 3
VSSQ 4
DQ2 5
DQ3 6
VDDQ 7
DQ4 8
DQ5 9
VSSQ 10
DQ6 11
DQ7 12
VDDQ 13
LDQM 14
/WE 15
/CAS 16
/RAS 17
/CS 18
A11 19
A10 20
A0 21
A1 22
A2 23
A3 24
VDD 25
50 VSS
49 DQ15
48 DQ14
47 VSSQ
46 DQ13
45 DQ12
44 VDDQ
43 DQ11
42 DQ10
41 VSSQ
40 DQ9
39 DQ8
38 VDDQ
37 NC
36 UDQM
35 CLK
34 CKE
33 NC
32 A9
31 A8
30 A7
29 A6
28 A5
27 A4
26 VSS
50pin TSOP II
400mil x 825mil
0.8mm pin pitch

PIN DESCRIPTION

PIN	PIN NAME	DESCRIPTION
CLK	Clock	The system clock input. All other inputs are referenced to the SDRAM on the rising edge of CLK.
CKE	Clock Enable	Controls internal clock signal and when deactivated, the SDRAM will be one of the states among power down, suspend or self refresh.
$\overline{\text{CS}}$	Chip Select	Command input enable or mask except CLK, CKE and DQM
BA	Bank Address	Select either one of banks during both $\overline{\text{RAS}}$ and $\overline{\text{CAS}}$ activity.
A0 ~ A10	Address	Row Address : RA0 ~ RA10, Column Address : CA0 ~ CA7 Auto-precharge flag : A10
$\overline{\text{RAS}}$, $\overline{\text{CAS}}$, $\overline{\text{WE}}$	Row Address Strobe, Column Address Strobe, Write Enable	$\overline{\text{RAS}}$, $\overline{\text{CAS}}$ and $\overline{\text{WE}}$ define the operation. Refer function truth table for details
LDQM, UDQM	Data Input/Output Mask	DQM control output buffer in read mode and mask input data in write mode
DQ0 ~ DQ15	Data Input/Output	Multiplexed data input / output pin
VDD/VSS	Power Supply/Ground	Power supply for internal circuit and input buffer
VDDQ/VSSQ	Data Output Power/Ground	Power supply for DQ
NC	No Connection	No connection

FUNCTIONAL BLOCK DIAGRAM

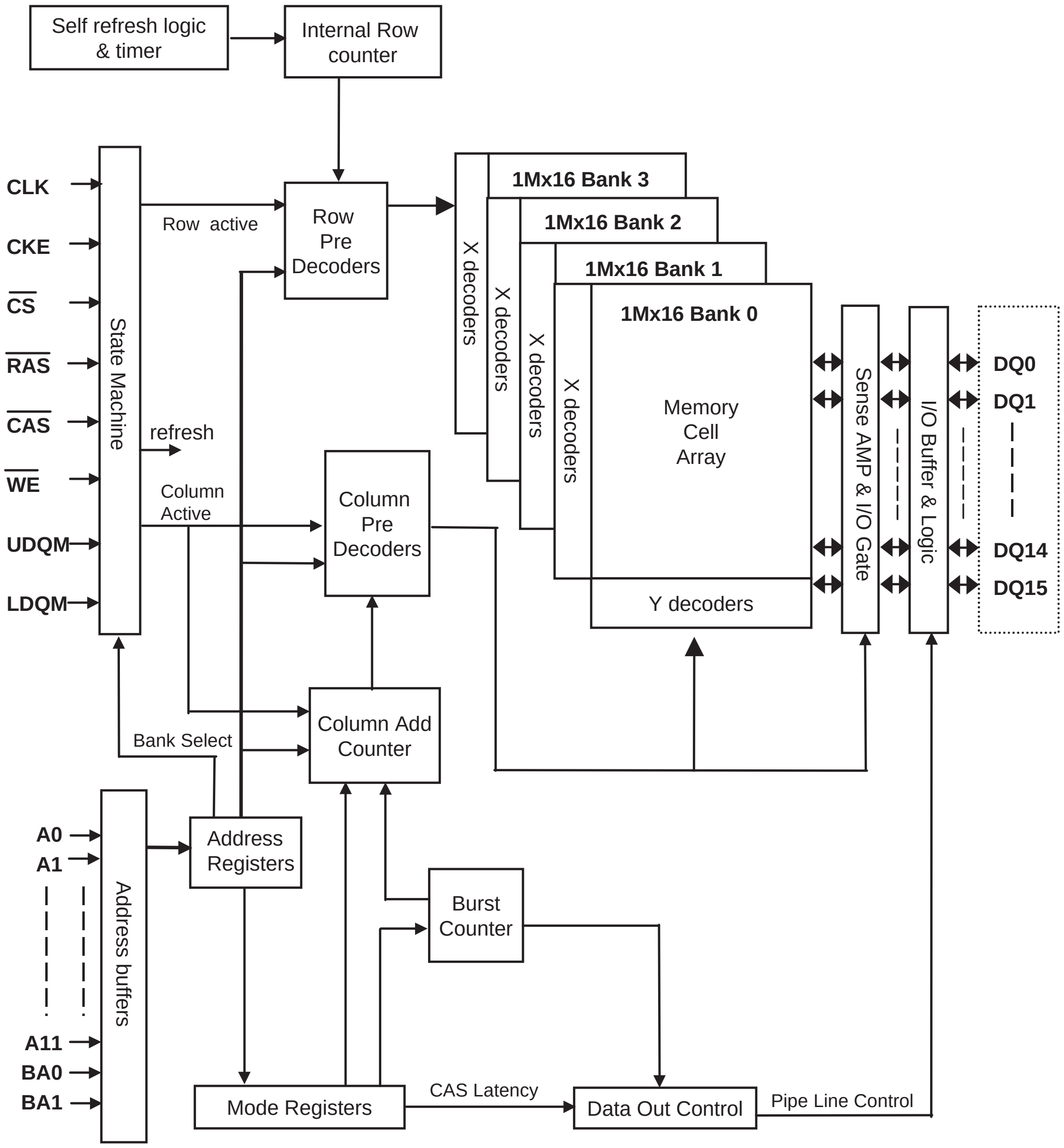
1Mx16 Synchronous DRAM


Self Refresh Counter
Refresh Interval Timer
Refresh Counter
Auto/Self Refresh
Ref. Addr.[0:11]
Address[0:10]
Row Addr. Latch/Predecoder
Row Decoder
512Kx16 Bank 0
Sense AMP & I/O gates
Column Decoder
CLK
CKE
BA(A11)
CS
RAS
CAS
WE
UDQM
LDQM
State Machine
Precharge
Row Active
Column Active
Address Register
Burst Length Counter
Overflow
Column Addr. Latch & Counter
Data Input/Output Buffers
DQ0
DQ1
DQ2
DQ3
DQ4
DQ5
DQ6
DQ7
DQ8
DQ9
DQ10
DQ11
DQ12
DQ13
DQ14
DQ15
Column Decoder
Sense AMP & I/O gates
Row Addr. Latch/Predecoder
512Kx16 Bank 1
Mode Register
Test Mode
I/O Control

HY57V641620HG(IC12:SDRAM)

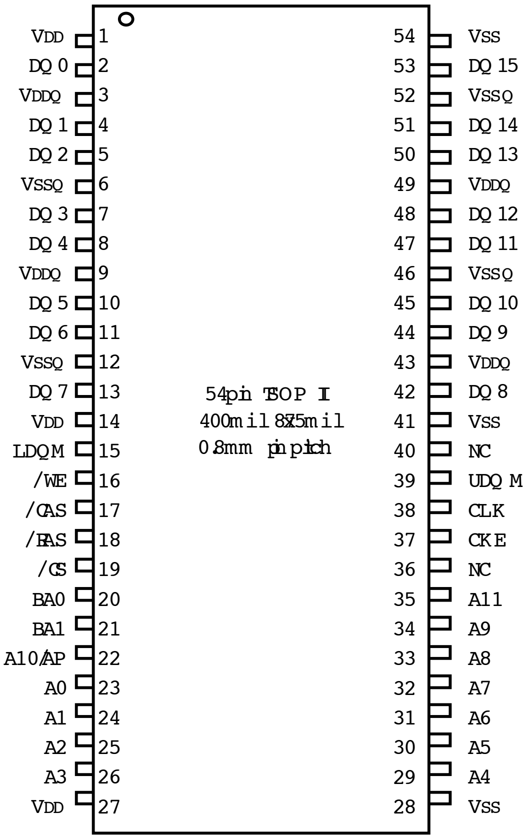
FUNCTIONAL BLOCK DIAGRAM

1Mbit x 4banks x 16 I/O Synchronous DRAM


Self refresh logic & timer
Internal Row counter
CLK
CKE
CS
RAS
CAS
WE
UDQM
LDQM
State Machine
Row active
refresh
Column Active
Row Pre Decoders
Column Pre Decoders
1Mx16 Bank 3
1Mx16 Bank 2
1Mx16 Bank 1
1Mx16 Bank 0
X decoders
Memory Cell Array
Y decoders
Sense AMP & I/O Gate
I/O Buffer & Logic
DQ0
DQ1
DQ14
DQ15
Bank Select
Column Add Counter
A0
A1
A11
BA0
BA1
Address buffers
Address Registers
Burst Counter
Mode Registers
CAS Latency
Data Out Control
Pipe Line Control

HY57V641620HG

PIN CONFIGURATION


VDD 1
DQ0 2
VDDQ 3
DQ1 4
DQ2 5
VSSQ 6
DQ3 7
DQ4 8
VDDQ 9
DQ5 10
DQ6 11
VSSQ 12
DQ7 13
VDD 14
LDQM 15
/WE 16
/CAS 17
/RAS 18
/CS 19
BA0 20
BA1 21
A10/AP 22
A0 23
A1 24
A2 25
A3 26
VDD 27
54 VSS
53 DQ15
52 VSSQ
51 DQ14
50 DQ13
49 VDDQ
48 DQ12
47 DQ11
46 VSSQ
45 DQ10
44 DQ9
43 VDDQ
42 DQ8
41 VSS
40 NC
39 UDQM
38 CLK
37 CKE
36 NC
35 A11
34 A9
33 A8
32 A7
31 A6
30 A5
29 A4
28 VSS
54pin TSOP II
400mil x 875mil
0.8mm pin pitch

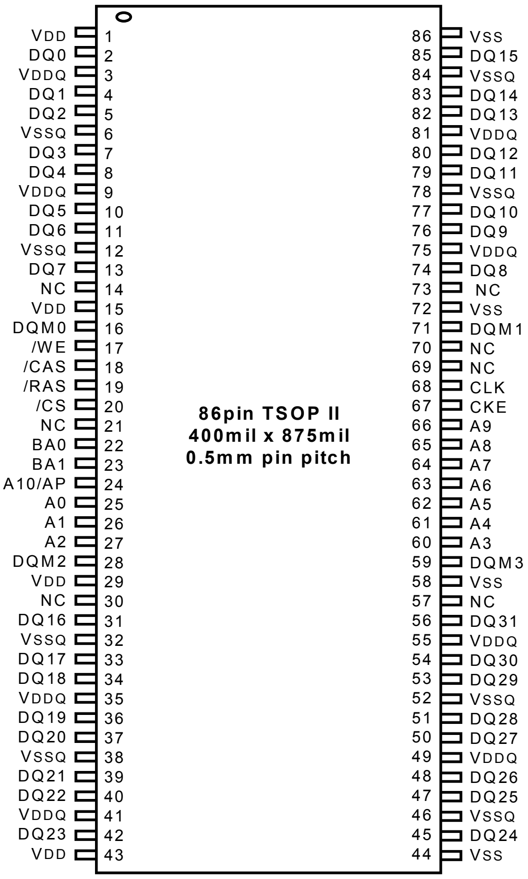
PIN DESCRIPTION

PIN	PIN NAME	DESCRIPTION
CLK	Clock	The system clock input. All other inputs are registered to the SDRAM on the rising edge of CLK
CKE	Clock Enable	Controls internal clock signal and when deactivated, the SDRAM will be one of the states among power down, suspend or self refresh
$\overline{CS}$	Chip Select	Enables or disables all inputs except CLK, CKE and DQM
BA0,BA1	Bank Address	Selects bank to be activated during $\overline{RAS}$ activity Selects bank to be read/written during $\overline{CAS}$ activity
A0 ~ A11	Address	Row Address : RA0 ~ RA11, Column Address : CA0 ~ CA7 Auto-precharge flag : A10
$\overline{RAS}$, $\overline{CAS}$, $\overline{WE}$	Row Address Strobe, Column Address Strobe, Write Enable	$\overline{RAS}$, $\overline{CAS}$ and $\overline{WE}$ define the operation Refer function truth table for details
LDQM, UDQM	Data Input/Output Mask	Controls output buffers in read mode and masks input data in write mode
DQ0 ~ DQ15	Data Input/Output	Multiplexed data input / output pin
VDD/VSS	Power Supply/Ground	Power supply for internal circuits and input buffers
VDDQ/VSSQ	Data Output Power/Ground	Power supply for output buffers
NC	No Connection	No connection

IC:24

HY57V643220C

PIN CONFIGURATION


VDD 1
DQ0 2
VDDQ 3
DQ1 4
DQ2 5
VSSQ 6
DQ3 7
DQ4 8
VDDQ 9
DQ5 10
DQ6 11
VSSQ 12
DQ7 13
NC 14
VDD 15
DQM0 16
/WE 17
/CAS 18
/RAS 19
/CS 20
NC 21
BA0 22
BA1 23
A10/AP 24
A0 25
A1 26
A2 27
DQM2 28
VDD 29
NC 30
DQ16 31
VSSQ 32
DQ17 33
DQ18 34
VDDQ 35
DQ19 36
DQ20 37
VSSQ 38
DQ21 39
DQ22 40
VDDQ 41
DQ23 42
VDD 43
86 VSS
85 DQ15
84 VSSQ
83 DQ14
82 DQ13
81 VDDQ
80 DQ12
79 DQ11
78 VSSQ
77 DQ10
76 DQ9
75 VDDQ
74 DQ8
73 NC
72 VSS
71 DQM1
70 NC
69 NC
68 CLK
67 CKE
66 A9
65 A8
64 A7
63 A6
62 A5
61 A4
60 A3
59 DQM3
58 VSS
57 NC
56 DQ31
55 VDDQ
54 DQ30
53 DQ29
52 VSSQ
51 DQ28
50 DQ27
49 VDDQ
48 DQ26
47 DQ25
46 VSSQ
45 DQ24
44 VSS
86pin TSOP II
400mil x 875mil
0.5mm pin pitch

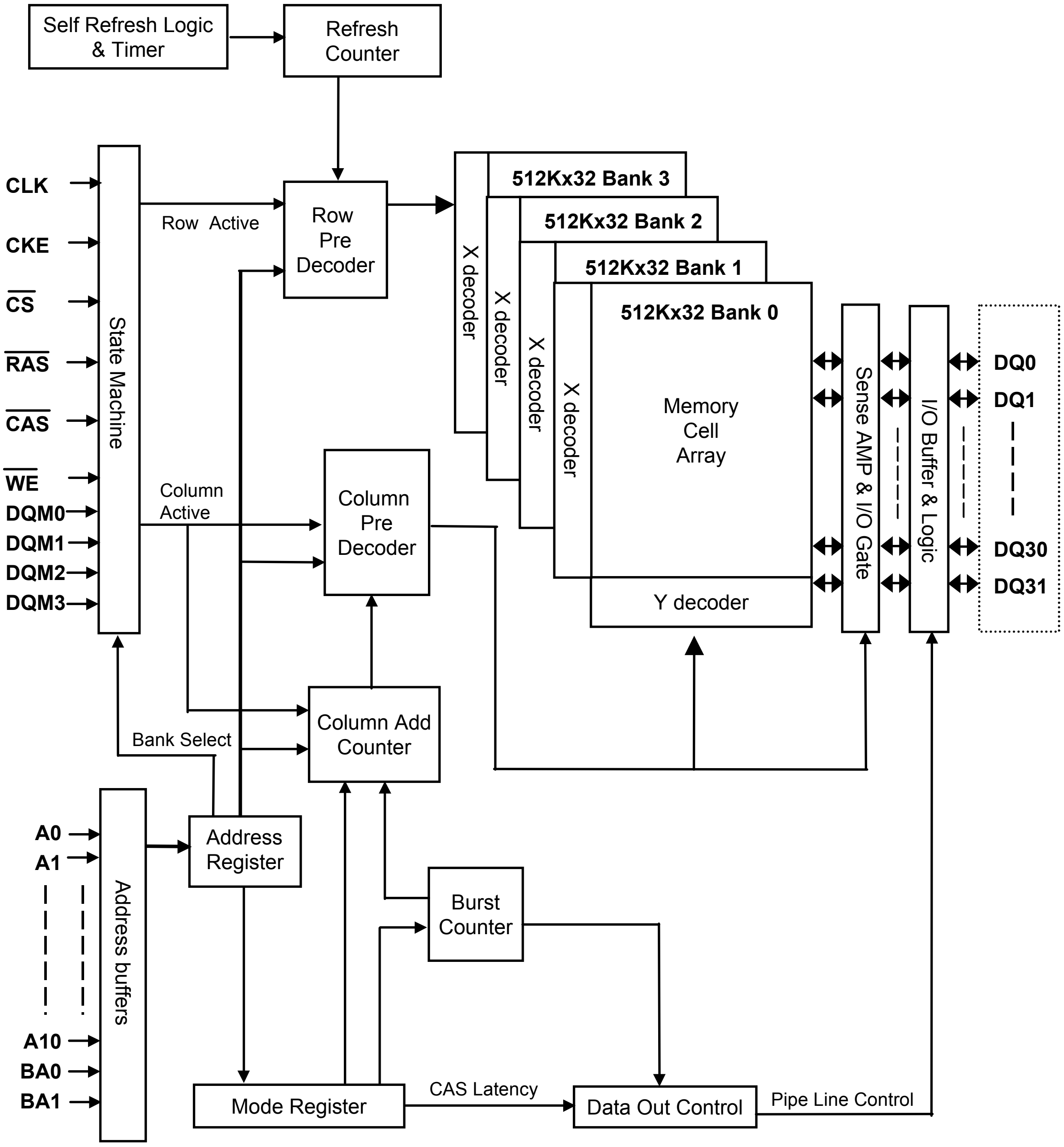
PIN DESCRIPTION

PIN	PIN NAME	DESCRIPTION
CLK	Clock	The system clock input. All other inputs are registered to the SDRAM on the rising edge of CLK.
CKE	Clock Enable	Controls internal clock signal and when deactivated, the SDRAM will be one of the states among power down, suspend or self refresh
$\overline{CS}$	Chip Select	Enables or disables all inputs except CLK, CKE and DQM
BA0, BA1	Bank Address	Selects bank to be activated during $\overline{RAS}$ activity Selects bank to be read/written during $\overline{CAS}$ activity
A0 ~ A10	Address	Row Address : RA0 ~ RA10, Column Address : CA0 ~ CA7 Auto-precharge flag : A10
$\overline{RAS}$, $\overline{CAS}$, $\overline{WE}$	Row Address Strobe, Column Address Strobe, Write Enable	$\overline{RAS}$, $\overline{CAS}$ and $\overline{WE}$ define the operation Refer function truth table for details
DQM0~3	Data Input/Output Mask	Controls output buffers in read mode and masks input data in write mode
DQ0 ~ DQ31	Data Input/Output	Multiplexed data input / output pin
VDD/VSS	Power Supply/Ground	Power supply for internal circuits and input buffers
VDDQ/VSSQ	Data Output Power/Ground	Power supply for output buffers
NC	No Connection	No connection

HY57V643220C

FUNCTIONAL BLOCK DIAGRAM

512Kbit x 4banks x 32 I/O Synchronous DRAM


Self Refresh Logic & Timer
Refresh Counter
CLK
CKE
CS
RAS
CAS
WE
DQM0
DQM1
DQM2
DQM3
State Machine
Row Active
Row Pre Decoder
512Kx32 Bank 3
512Kx32 Bank 2
512Kx32 Bank 1
512Kx32 Bank 0
X decoder
X decoder
X decoder
X decoder
Memory Cell Array
Y decoder
Sense AMP & I/O Gate
I/O Buffer & Logic
DQ0
DQ1
DQ30
DQ31
Column Active
Column Pre Decoder
Column Add Counter
Bank Select
A0
A1
A10
BA0
BA1
Address buffers
Address Register
Burst Counter
Mode Register
CAS Latency
Data Out Control
Pipe Line Control

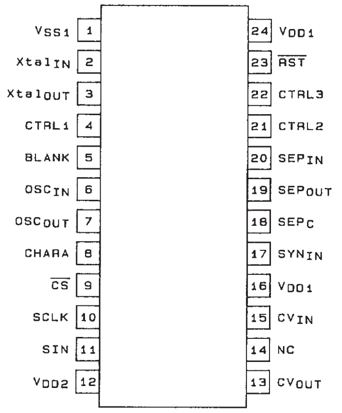
*LC74781M : IC80 , IC81

LC74781, 74781M

Pin Functions

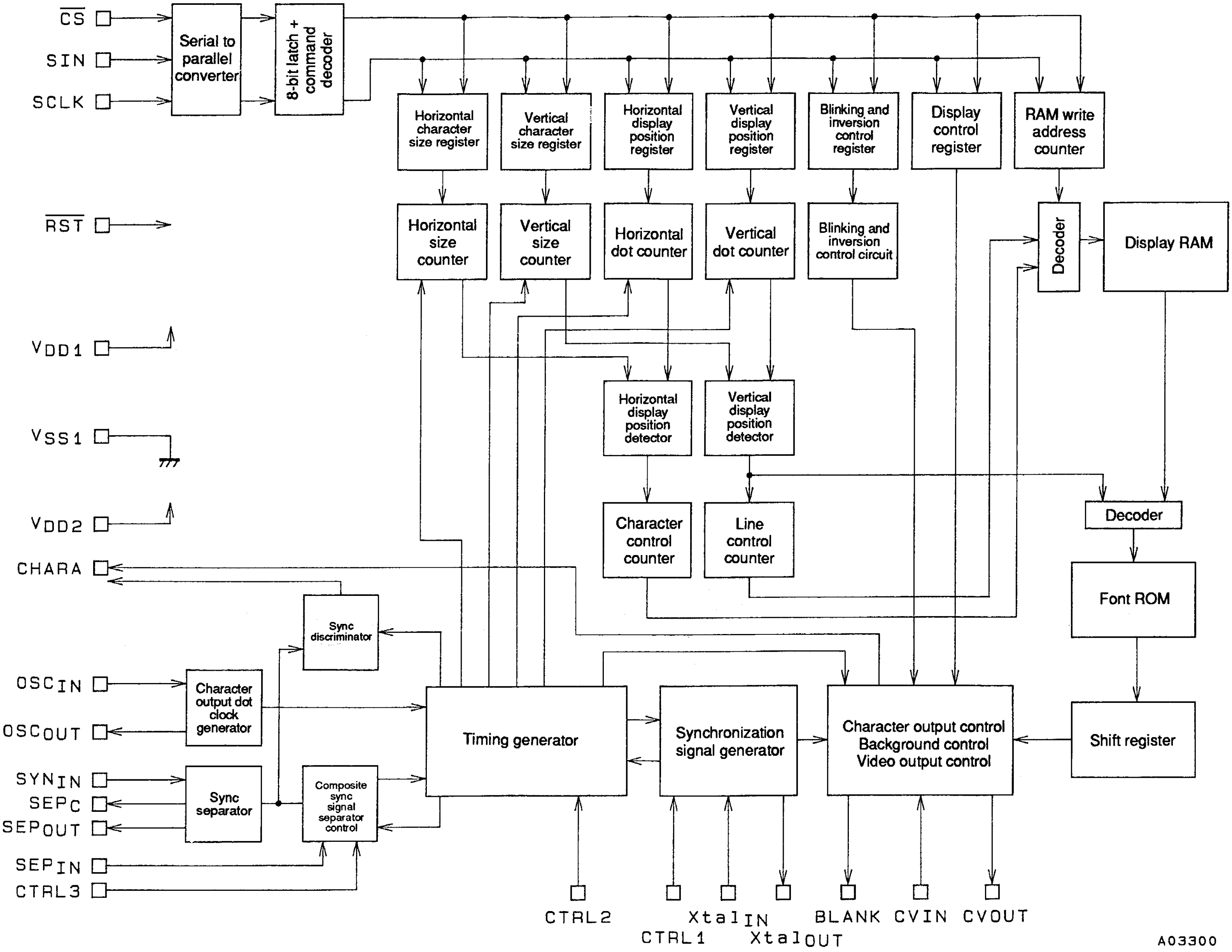
Pin No.	Symbol	Function	Description
1	$V_{SS}1$	Ground	Ground connection (digital system ground)
2	$Xtal_{IN}$	Crystal oscillator connection	Used to connect the crystal oscillator and capacitor used to generate the internal synchronization signal, or to input an external clock (2fsc or 4fsc).
3	$Xtal_{OUT}$		
4	CTRL1	Crystal oscillator input switching	Switches between external clock input mode and crystal oscillator mode. Low = crystal oscillator mode, high = external clock mode
5	BLANK	Blanking output	Outputs the blank signal (the OR of the character and border signals). (Outputs a composite sync signal when MOD0 is high.) Outputs the crystal oscillator clock during reset (when the $\overline{RST}$ pin is low), but can be set up to not output this signal by microprocessor command.
6	OSC_{IN}	LC oscillator connection	Connections for the coil and capacitor that form the oscillator that generates the character output dot clock.
7	OSC_{OUT}		
8	CHARA	Character output	Outputs the character signal. (Functions as the external synchronization signal discrimination signal output pin when MOD0 is high, and outputs the state of the judgment as to whether the external synchronization signal is present or not. Outputs a high level when the synchronization signal is present.) Outputs the dot clock (LC oscillator) during reset, but can be set up to not output this signal by microprocessor command.
9	$\overline{CS}$	Enable input	Serial data input enable input. Serial data input is enabled when low. A pull-up resistor is built in (hysteresis input).
10	SCLK	Clock input	Serial data input clock input. A pull-up resistor is built in (hysteresis input).
11	SIN	Data input	Serial data input. A pull-up resistor is built in (hysteresis input).
12	$V_{DD}2$	Power supply	Composite video signal level adjustment power supply pin (analog system power supply).
13	CV_{OUT}	Video signal output	Composite video signal output
14	NC		Must be either connected to ground or left open.
15	CV_{IN}	Video signal input	Composite video signal input
16	$V_{DD}1$	Power supply	Power supply (+5 V: digital system power supply)
17	SYN_{IN}	Sync separator circuit input	Video signal input for the built-in sync separator circuit (Used for either horizontal synchronization signal or composite sync signal input when the built-in sync separator circuit is not used.)
18	SEP_C	Sync separator circuit bias voltage	Built-in sync separator circuit bias voltage monitor pin
19	SEP_{OUT}	Composite sync signal output	Built-in sync separator circuit composite sync signal output. (When MOD1 is high, outputs a high level during internal synchronization and a low level during external synchronization.) (Outputs the SYN_{IN} input signal when the internal sync separator circuit is not used.)
20	SEP_{IN}	Vertical synchronization signal input	Inputs a vertical synchronization signal created by integrating the SEP_{OUT} pin output signal. An integrator must be attached at the SEP_{OUT} pin. This pin must be tied to $V_{DD}1$ if unused.
21	CTRL2	NTSC/PAL-M switching input	The setting indicated by this pin takes priority in switching between the NTSC, PAL, PAL-M and PAL-N formats. A low level selects NTSC after a reset. The microprocessor command NTSC, PAL, PAL-M, or PAL-N setting is valid. High = PAL-M format.
22	CTRL3	SEP_{IN} input control	Controls whether or not the $\overline{VSYNC}$ signal is input to the SEP_{IN} input. Low = $\overline{VSYNC}$ input, high = $\overline{VSYNC}$ not input.
23	RST	Reset input	System reset input. A pull-up resistor is built in (hysteresis input).
24	$V_{DD}1$	Power supply (+5 V)	Power supply (+5 V: digital system power supply)

DIP24S, MFP24



Top view

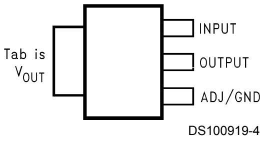
System Block Diagram


CS
SIN
SCLK
Serial to parallel converter
8-bit latch + command decoder
Horizontal character size register
Vertical character size register
Horizontal display position register
Vertical display position register
Blinking and inversion control register
Display control register
RAM write address counter
RST
Horizontal size counter
Vertical size counter
Horizontal dot counter
Vertical dot counter
Blinking and inversion control circuit
Decoder
Display RAM
VDD1
Horizontal display position detector
Vertical display position detector
VSS1
Decoder
VDD2
Character control counter
Line control counter
Font ROM
CHARA
Sync discriminator
OSCIN
OSCOUT
Character output dot clock generator
Timing generator
Synchronization signal generator
Character output control
Background control
Video output control
Shift register
SYNIN
SEPC
SEPOUT
Sync separator
Composite sync signal separator control
SEPIN
CTRL3
CTRL2
CTRL1
XtalIN
XtalOUT
BLANK
CVIN
CVOUT
A03300

* LM1117-1.8
(RG11 , RG13 , RG14)

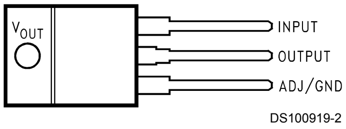
* LM1117-2.8
(RG12)

* LM1117-3.3
(RG15)


Tab is
VOUT
INPUT
OUTPUT
ADJ/GND
DS100919-4

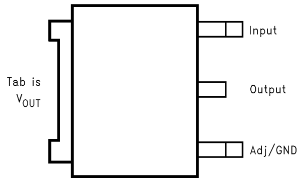
Top View

TO-220

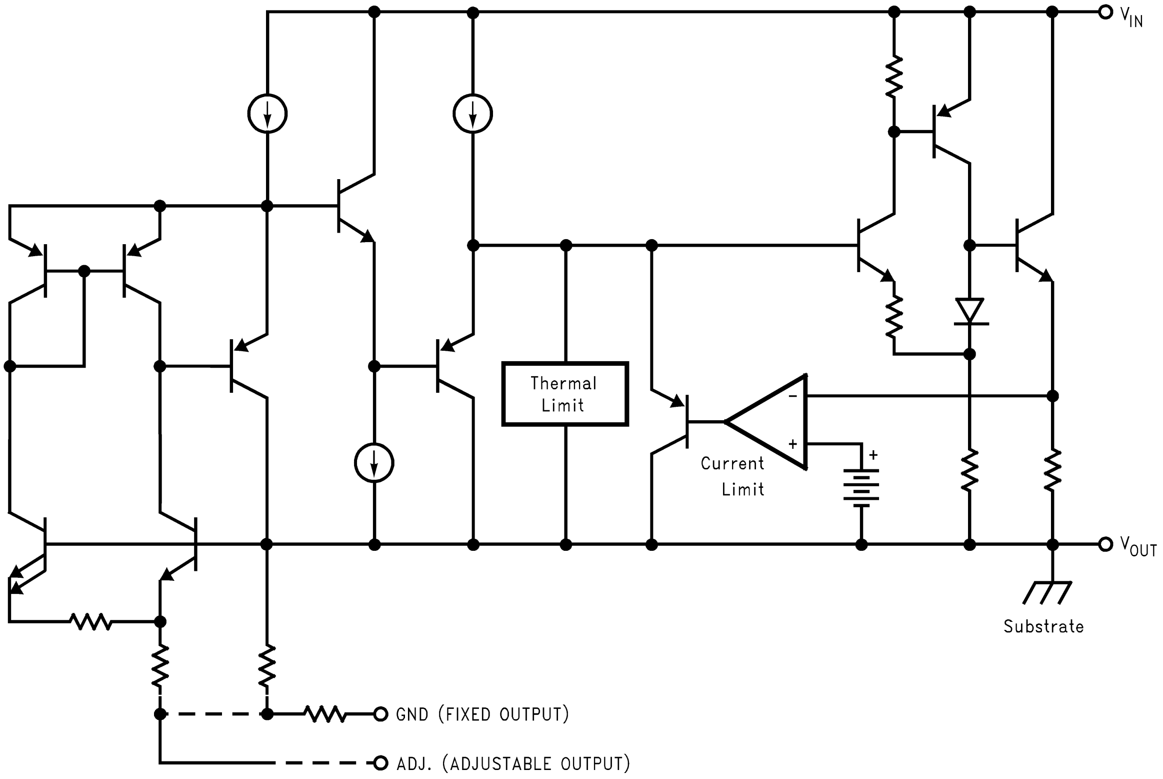

VOUT
INPUT
OUTPUT
ADJ/GND
DS100919-2

Top View

TO-252

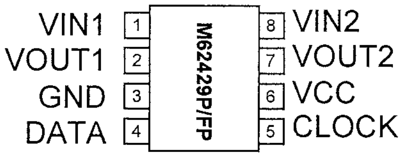

Tab is
VOUT
Input
Output
Adj/GND

* BLOCK DIAGRAM


VIN
Thermal
Limit
Current
Limit
VOUT
Substrate
GND (FIXED OUTPUT)
ADJ. (ADJUSTABLE OUTPUT)

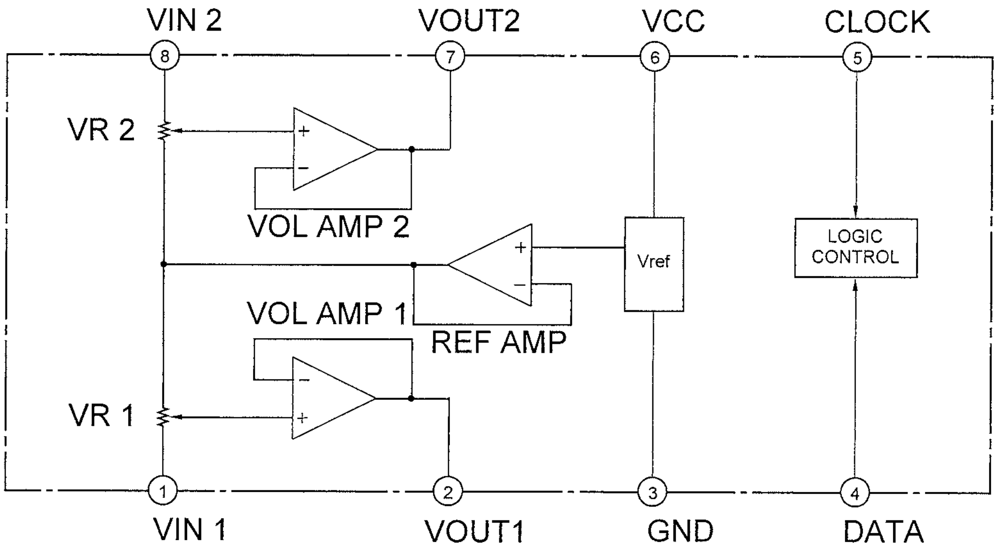
M62429FP : IC88

PIN CONFIGURATION (TOP VIEW)


VIN1
VOUT1
GND
DATA
1
2
3
4
M62429P/FP
8
7
6
5
VIN2
VOUT2
VCC
CLOCK

Outline 8P4(P)
8P2S-A(FP)

IC INTERNAL BLOCK DIAGRAM

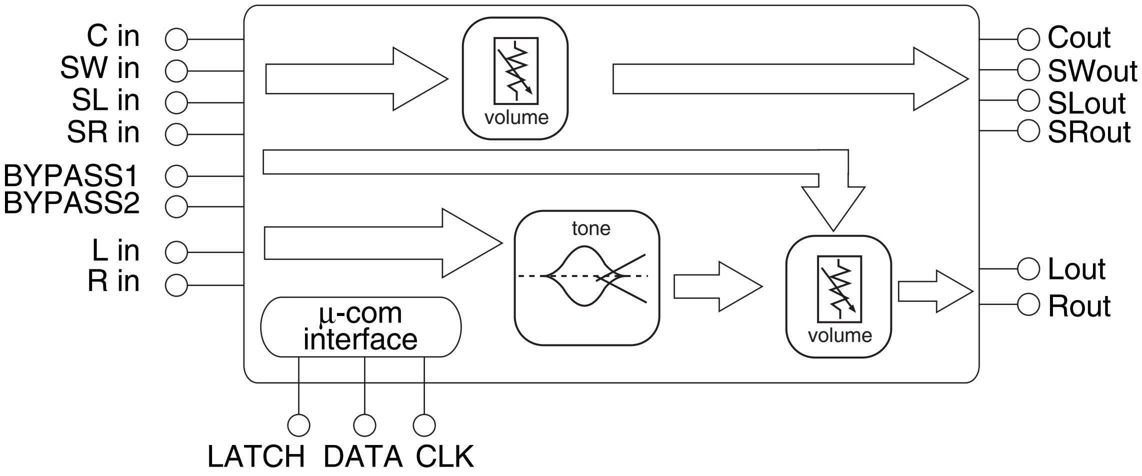

VIN 2
VOUT2
VCC
CLOCK
8
7
6
5
VR 2
VOL AMP 2
Vref
LOGIC CONTROL
REF AMP
VOL AMP 1
VR 1
1
2
3
4
VIN 1
VOUT1
GND
DATA

PIN DESCRIPTION

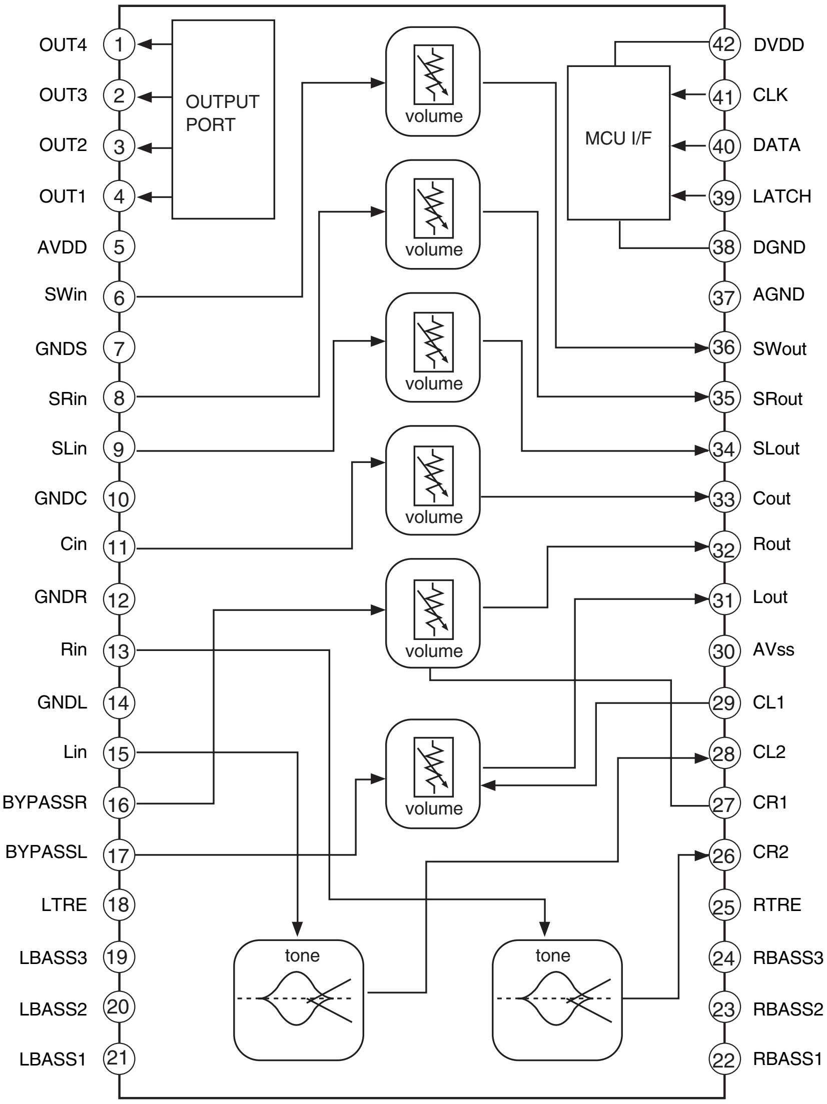
Pin No.	Symbol	Function
①	VIN 1	1-ch input pin
②	VOUT1	1-ch output pin
③	GND	Ground pin
④	DATA	Control data input pin. Inputs data in synchronization with clock.
⑤	CLOCK	Clock input pin for transferring serial data.
⑥	VCC	Power supply pin. Stabilize the pin with decoupling capacitor.
⑦	VOUT2	2-ch output pin
⑧	VIN2	1-ch input pin

M62446FP (6CH ELECTRONIC VOLUME : IC58)

■ SYSTEM BLOCK DIAGRAM

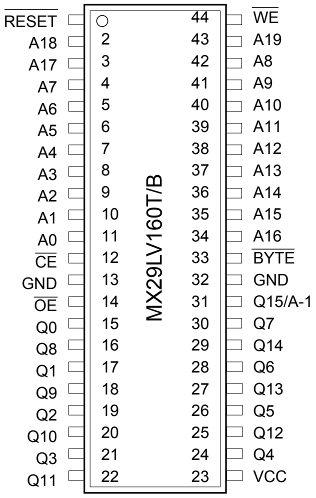

C in
SW in
SL in
SR in
BYPASS1
BYPASS2
L in
R in
volume
tone
volume
µ-com interface
Cout
SWout
SLout
SRout
Lout
Rout
LATCH
DATA
CLK

■ PIN CONFIGURATION AND IC INTERNAL BLOCK DIAGRAM


OUT4 1
OUT3 2
OUT2 3
OUT1 4
AVDD 5
SWin 6
GNDS 7
SRin 8
SLin 9
GNDC 10
Cin 11
GNDR 12
Rin 13
GNDL 14
Lin 15
BYPASSR 16
BYPASSL 17
LTRE 18
LBASS3 19
LBASS2 20
LBASS1 21
RBASS1 22
RBASS2 23
RBASS3 24
RTRE 25
CR2 26
CR1 27
CL2 28
CL1 29
AVss 30
Lout 31
Rout 32
Cout 33
SLout 34
SRout 35
SWout 36
AGND 37
DGND 38
LATCH 39
DATA 40
CLK 41
DVDD 42
OUTPUT PORT
MCU I/F
volume
volume
volume
volume
volume
volume
tone
tone

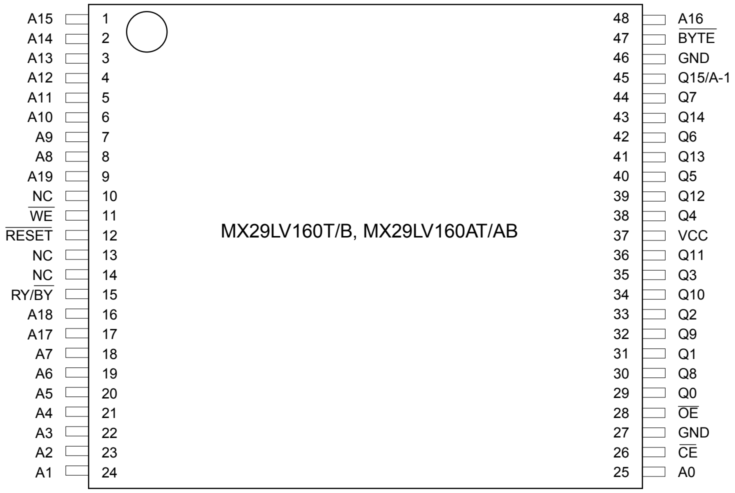
* MX29LV160ABT : IC16

44 SOP(500 mil)

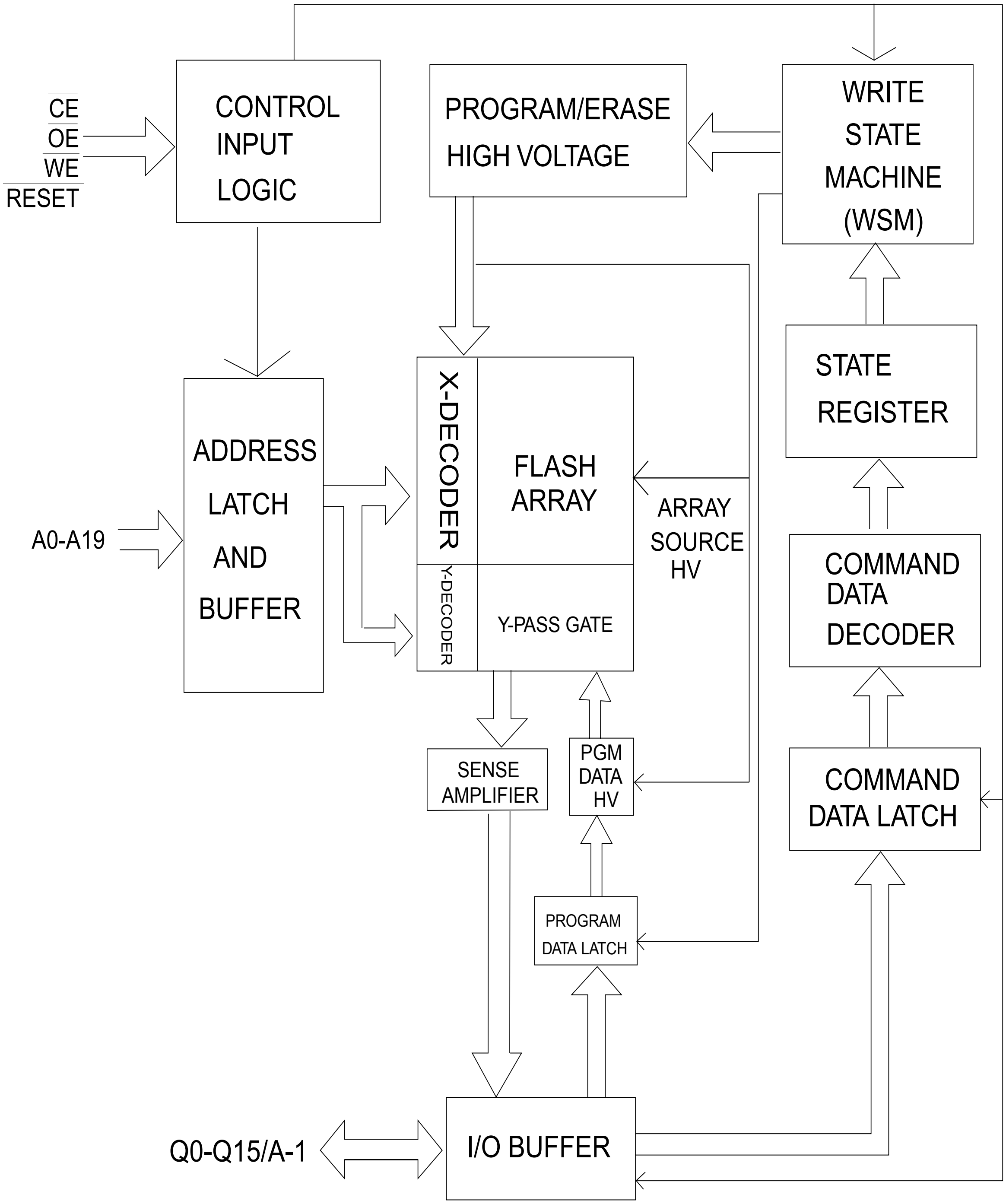

MX29LV160T/B
$\overline{\text{RESET}}$ 1 44 $\overline{\text{WE}}$
A18 2 43 A19
A17 3 42 A8
A7 4 41 A9
A6 5 40 A10
A5 6 39 A11
A4 7 38 A12
A3 8 37 A13
A2 9 36 A14
A1 10 35 A15
A0 11 34 A16
$\overline{\text{CE}}$ 12 33 $\overline{\text{BYTE}}$
GND 13 32 GND
$\overline{\text{OE}}$ 14 31 Q15/A-1
Q0 15 30 Q7
Q8 16 29 Q14
Q1 17 28 Q6
Q9 18 27 Q13
Q2 19 26 Q5
Q10 20 25 Q12
Q3 21 24 Q4
Q11 22 23 VCC

SYMBOL	PIN NAME
A0~A19	Address Input
Q0~Q14	Data Input/Output
Q15/A-1	Q15(Word mode)/LSB addr(Byte mode)
$\overline{\text{CE}}$	Chip Enable Input
$\overline{\text{WE}}$	Write Enable Input
$\overline{\text{BYTE}}$	Word/Byte Selection input
$\overline{\text{RESET}}$	Hardware Reset Pin/Sector Protect Unlock
$\overline{\text{OE}}$	Output Enable Input
RY/$\overline{\text{BY}}$	Ready/Busy Output
VCC	Power Supply Pin (2.7V~3.6V)
GND	Ground Pin

48 TSOP (Standard Type) (12mm x 20mm)


MX29LV160T/B, MX29LV160AT/AB
A15 1 48 A16
A14 2 47 $\overline{\text{BYTE}}$
A13 3 46 GND
A12 4 45 Q15/A-1
A11 5 44 Q7
A10 6 43 Q14
A9 7 42 Q6
A8 8 41 Q13
A19 9 40 Q5
NC 10 39 Q12
$\overline{\text{WE}}$ 11 38 Q4
$\overline{\text{RESET}}$ 12 37 VCC
NC 13 36 Q11
NC 14 35 Q3
RY/$\overline{\text{BY}}$ 15 34 Q10
A18 16 33 Q2
A17 17 32 Q9
A7 18 31 Q1
A6 19 30 Q8
A5 20 29 Q0
A4 21 28 $\overline{\text{OE}}$
A3 22 27 GND
A2 23 26 $\overline{\text{CE}}$
A1 24 25 A0

*** BLOCK DIAGRAM**

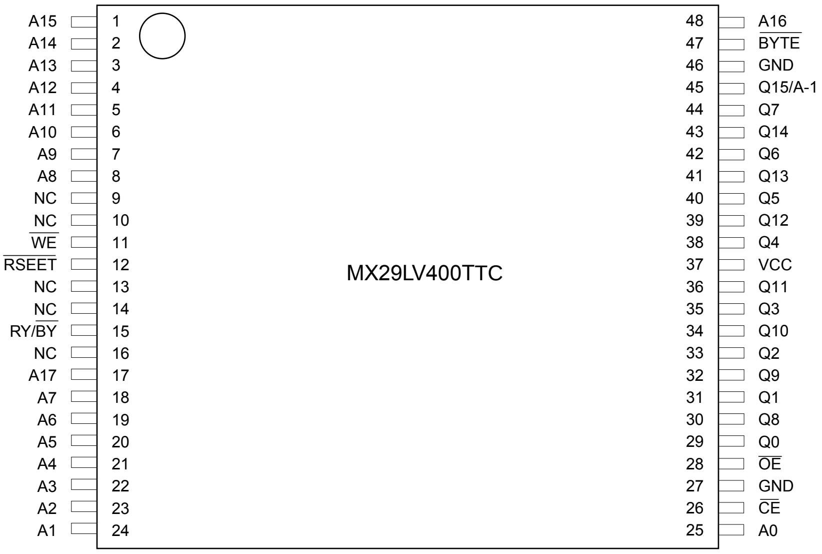

CE
OE
WE
RESET
CONTROL INPUT LOGIC
PROGRAM/ERASE HIGH VOLTAGE
WRITE STATE MACHINE (WSM)
STATE REGISTER
COMMAND DATA DECODER
COMMAND DATA LATCH
A0-A19
ADDRESS LATCH AND BUFFER
X-DECODER
FLASH ARRAY
Y-DECODER
Y-PASS GATE
ARRAY SOURCE HV
SENSE AMPLIFIER
PGM DATA HV
PROGRAM DATA LATCH
Q0-Q15/A-1
I/O BUFFER

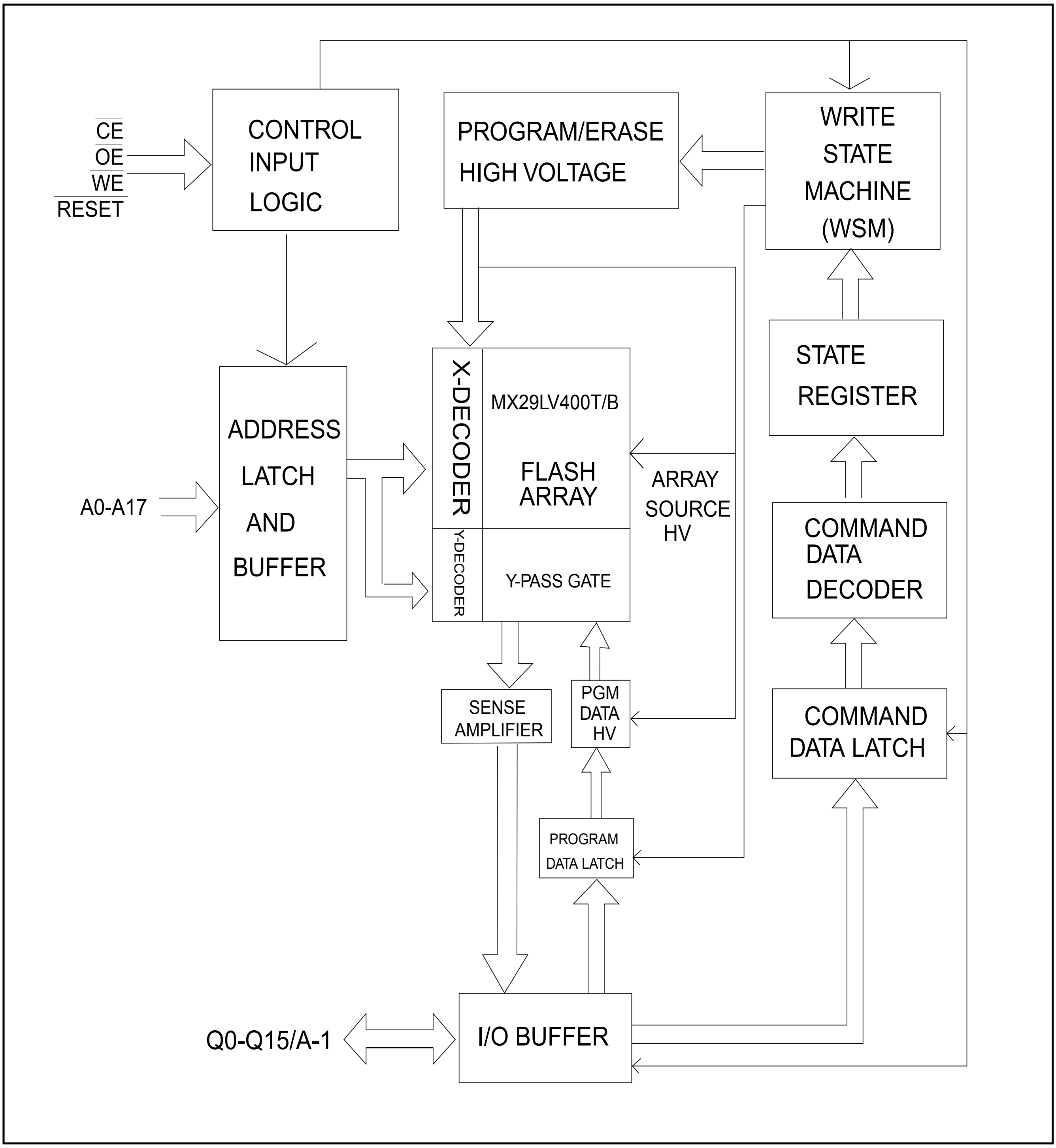
FLASH MEMORY / MX29LV400TTC (IC33)

■ PIN DESCRIPTION

SYMBOL	PIN NAME
A0~A17	Address Input
Q0~Q14	Data Input/Output
Q15/A-1	Q15(Word mode)/LSB addr(Byte mode)
$\overline{\text{CE}}$	Chip Enable Input
$\overline{\text{WE}}$	Write Enable Input
$\overline{\text{BYTE}}$	Word/Byte Selection input
$\overline{\text{RESET}}$	Hardware Reset Pin/Sector Protect Unlock
$\overline{\text{OE}}$	Output Enable Input
RY/$\overline{\text{BY}}$	Ready/Busy Output
VCC	Power Supply Pin (2.7V~3.6V)
GND	Ground Pin

■ 48 TSOP (Standard Type) (12mm x 20mm)


MX29LV400TTC
A15 1
A14 2
A13 3
A12 4
A11 5
A10 6
A9 7
A8 8
NC 9
NC 10
WE 11
RSEET 12
NC 13
NC 14
RY/BY 15
NC 16
A17 17
A7 18
A6 19
A5 20
A4 21
A3 22
A2 23
A1 24
48 A16
47 BYTE
46 GND
45 Q15/A-1
44 Q7
43 Q14
42 Q6
41 Q13
40 Q5
39 Q12
38 Q4
37 VCC
36 Q11
35 Q3
34 Q10
33 Q2
32 Q9
31 Q1
30 Q8
29 Q0
28 OE
27 GND
26 CE
25 A0


CE
OE
WE
RESET
CONTROL INPUT LOGIC
PROGRAM/ERASE HIGH VOLTAGE
WRITE STATE MACHINE (WSM)
STATE REGISTER
COMMAND DATA DECODER
COMMAND DATA LATCH
ADDRESS LATCH AND BUFFER
A0-A17
X-DECODER
MX29LV400T/B
FLASH ARRAY
Y-DECODER
Y-PASS GATE
ARRAY SOURCE HV
SENSE AMPLIFIER
PGM DATA HV
PROGRAM DATA LATCH
I/O BUFFER
Q0-Q15/A-1

NJM2068M (OP-AMP) :
IC35~IC38 , IC52 , IC13~IC16

JRC

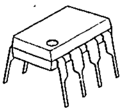
NJM2068

LOW-NOISE DUAL OPERATIONAL AMPLIFIER

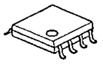
■ GENERAL DESCRIPTION

The NJM2068 is a high performance, low noise dual operational amplifier. This amplifier features popular pin-out, superior noise performance, and superior total harmonic distortion. This amplifier also features guaranteed noise performance with substantially higher gain-bandwidth product and slew rate which far exceeds that of the 4558 type amplifier. The specially designed low noise input transistors allow the NJM2068 to be used in very low noise signal processing applications such as audio preamplifiers and servo error amplifier.

■ PACKAGE OUTLINE

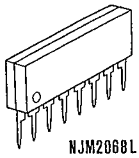


NJM2068D



NJM2068M

NJM2068V

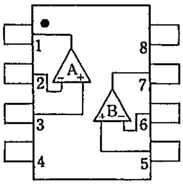


NJM2068L

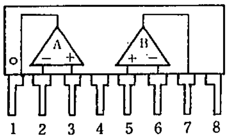
■ FEATURES

● Operating Voltage	(±4V~±18V)
● Low Total Harmonic Distortion	(0.001% typ.)
● Low Noise Voltage	(FLAT+JISA, 0.56μV typ.)
● High Slew Rate	(6V/μs typ.)
● Unity Gain Bandwidth	(27MHz @f=10kHz)
● Package Outline	DIP8, DMP8, SIP8, SSOP8
● Bipolar Technology	

■ PIN CONFIGURATION



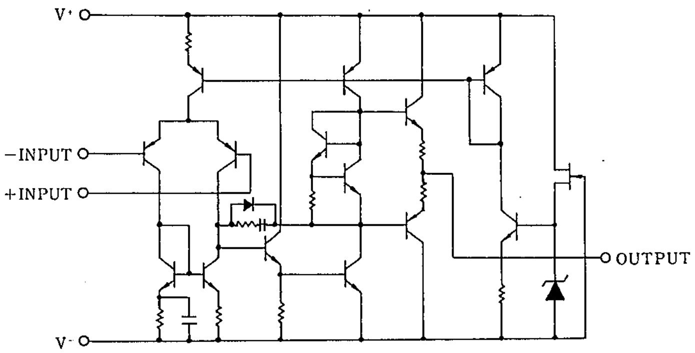
NJM2068D
NJM2068M
NJM2068V



NJM2068L

PIN FUNCITON
1. A OUTPUT
2. A−INPUT
3. A+INPUT
4. V⁻
5. B+INPUT
6. B−INPUT
7. B OUTPUT
8. V⁺

■ EQUIVALENT CIRCUIT (1/2 Shown)



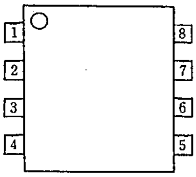
JRC

< IC75,IC76,IC78 >

NJM2244

3-INPUT VIDEO SWITCH WITH 75Ω DRIVER

■ PIN CONFIGURATION



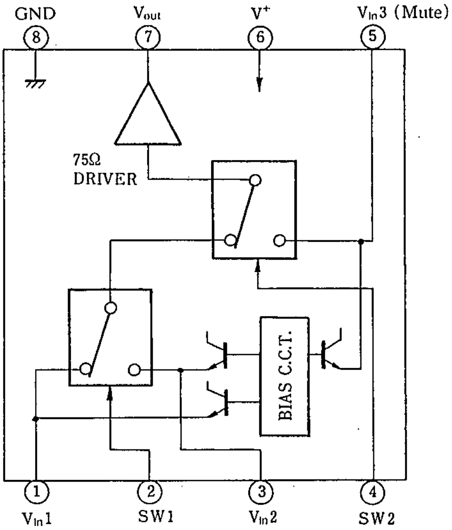
NJM2244D
NJM2244M

PIN FUNCTION

1. $V_{in}1$
2. SW1
3. $V_{in}2$
4. SW2
5. $V_{in}3$
6. V^+
7. V_{out}
8. GND

■ BLOCK DIAGRAM

Pin Connection

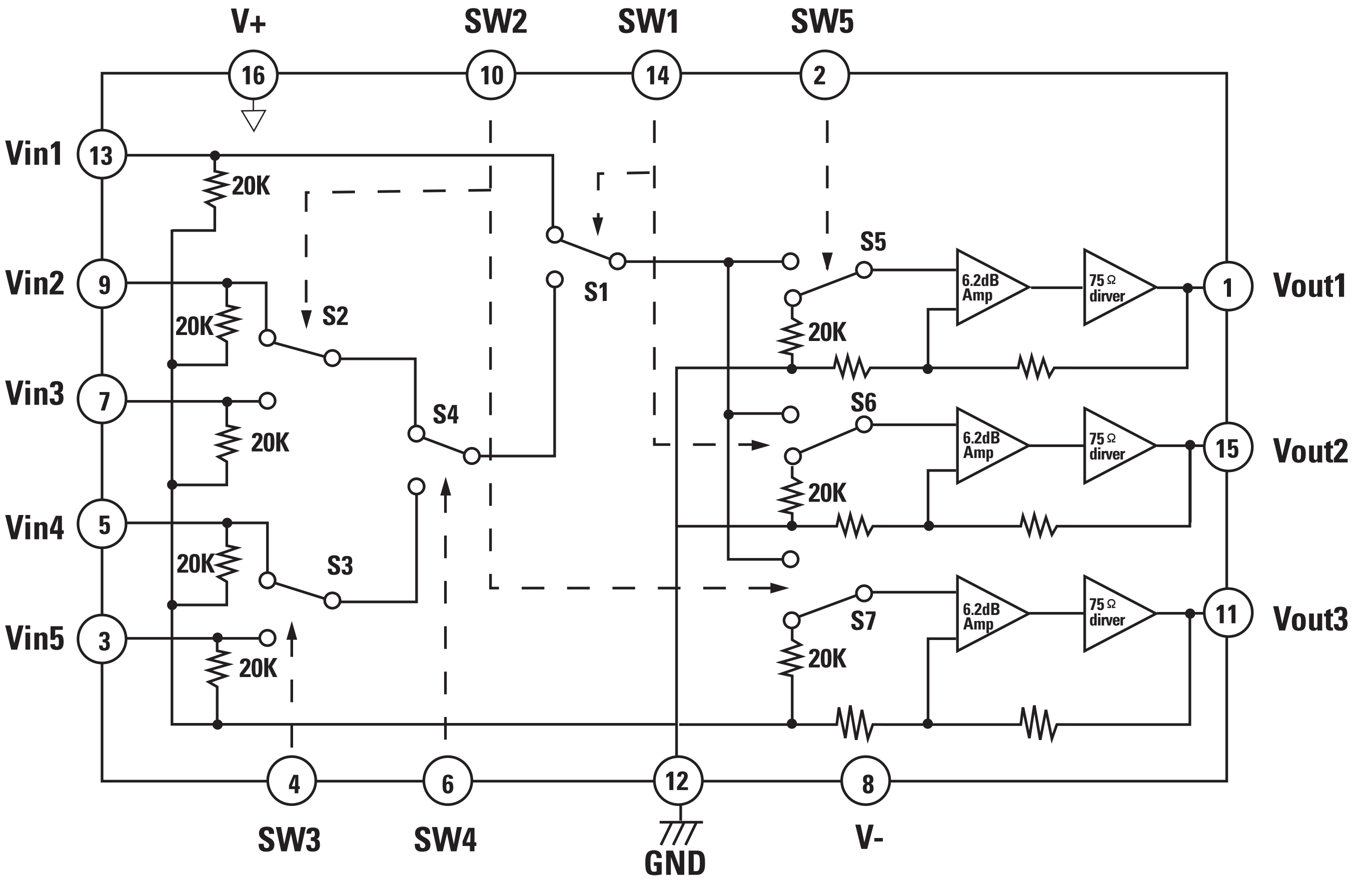

GND
Vout
V+
Vin3 (Mute)
8
7
6
5
75Ω
DRIVER
BIAS C.C.T.
1
2
3
4
Vin1
SW1
Vin2
SW2

■ INPUT CONTROL SIGNAL-OUTPUT SIGNAL

SW 1	SW 2	OUTPUT SIGNAL
L	L	$V_{IN}1$
H	L	$V_{IN}2$
L/H	H	$V_{IN}3$

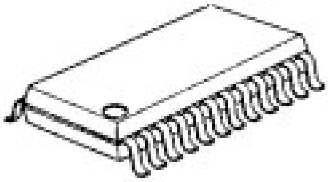
note): Input clamp voltage is about 2/5 of supply voltage.

■ BLOCK DIAGAM (NJM2296M) : IC71~IC73

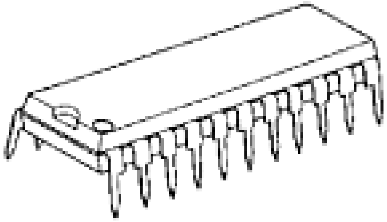

V+
SW2
SW1
SW5
16
10
14
2
Vin1
13
Vin2
9
Vin3
7
Vin4
5
Vin5
3
20K
S1
S2
S3
S4
S5
S6
S7
6.2dB Amp
75 Ω dirver
Vout1
1
Vout2
15
Vout3
11
4
6
12
8
SW3
SW4
GND
V-

∗ Normally mute
Above circuits show that the switches are set at low.

* NJM2586 < IC25 >

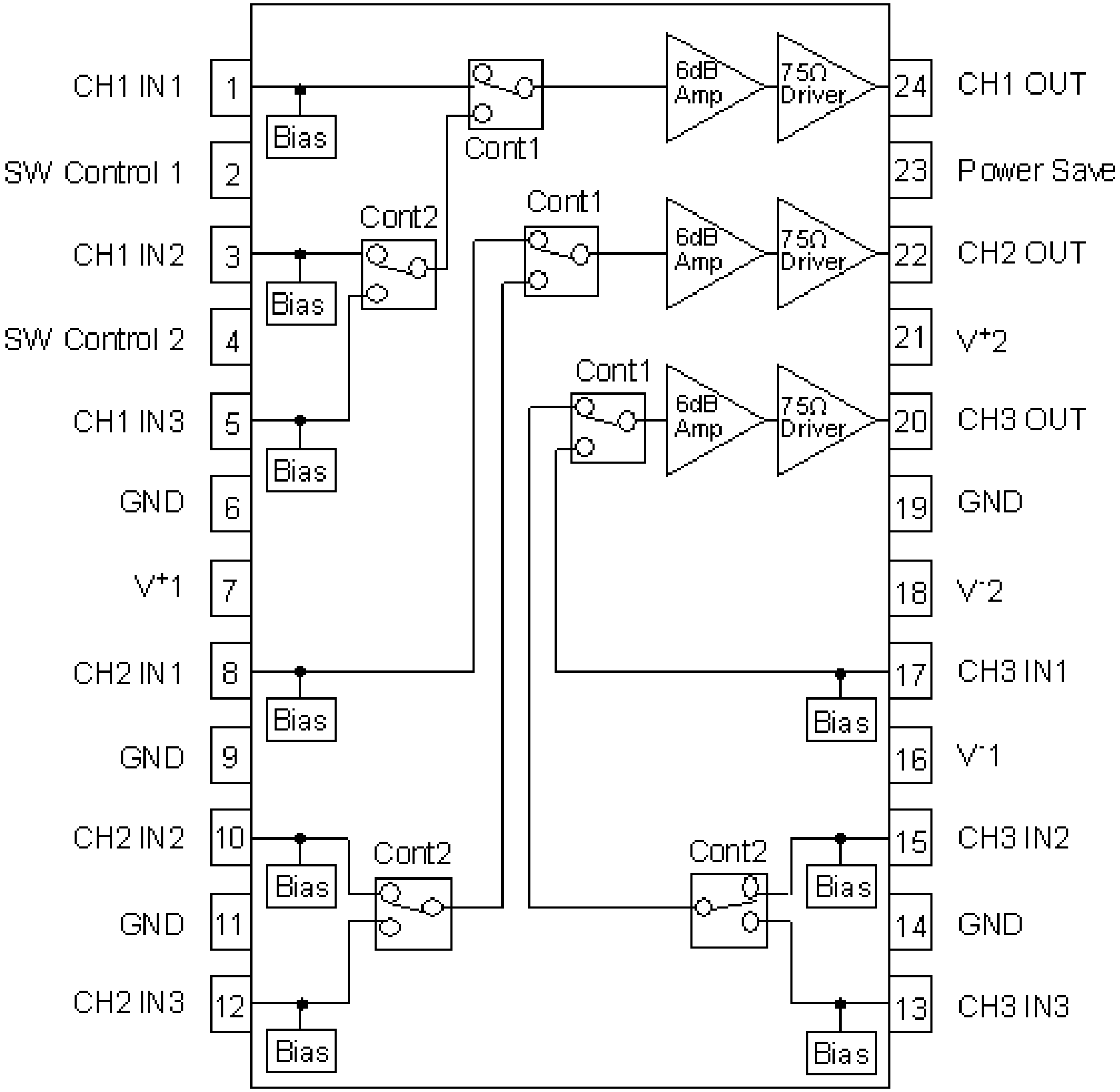


NJM2586L



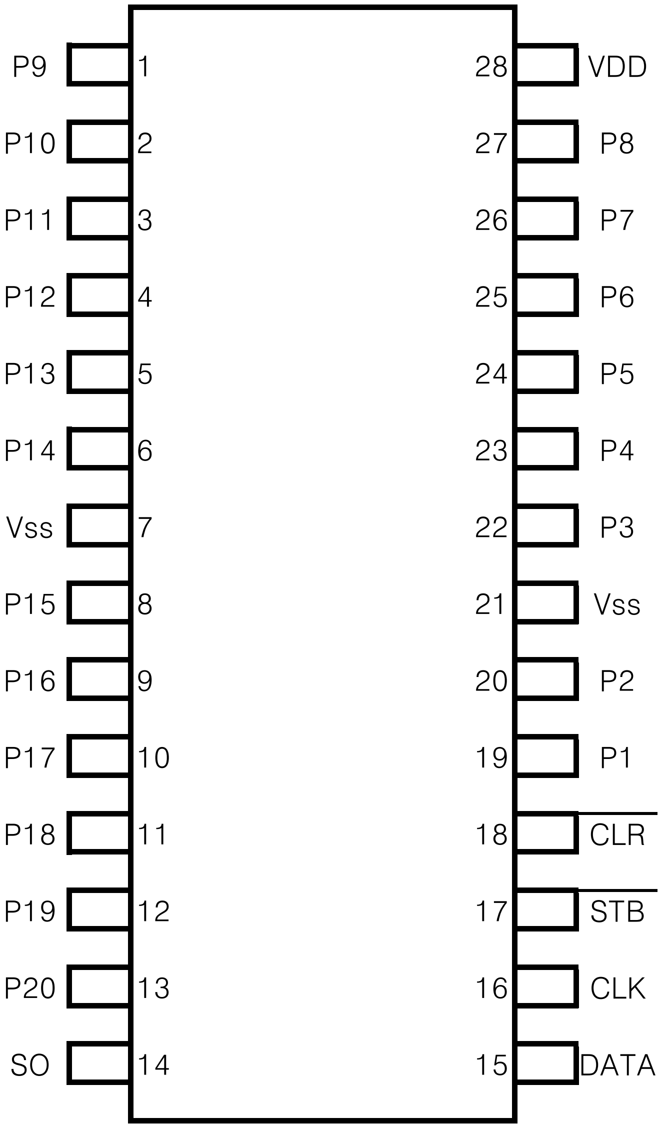
NJM2586M

[BLOCK DIAGRAM]


CH1 IN1
1
SW Control 1
2
CH1 IN2
3
SW Control 2
4
CH1 IN3
5
GND
6
V+1
7
CH2 IN1
8
GND
9
CH2 IN2
10
GND
11
CH2 IN3
12
Bias
Cont1
Cont2
6dB Amp
75Ω Driver
24
CH1 OUT
23
Power Save
22
CH2 OUT
21
V+2
20
CH3 OUT
19
GND
18
V-2
17
CH3 IN1
16
V-1
15
CH3 IN2
14
GND
13
CH3 IN3

NJU3718G

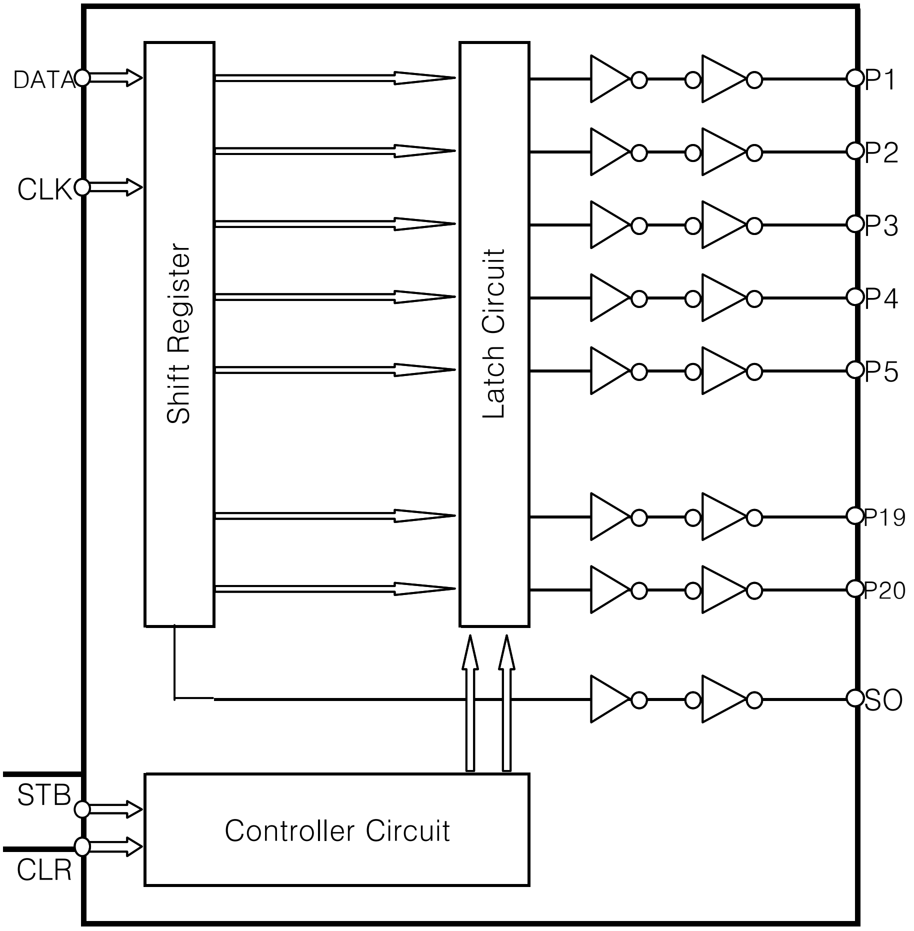
* PIN CONFIGURATION


P9
1
P10
2
P11
3
P12
4
P13
5
P14
6
Vss
7
P15
8
P16
9
P17
10
P18
11
P19
12
P20
13
SO
14
28
VDD
27
P8
26
P7
25
P6
24
P5
23
P4
22
P3
21
Vss
20
P2
19
P1
18
$\overline{CLR}$
17
$\overline{STB}$
16
CLK
15
DATA

* PIN DESCRIPTION

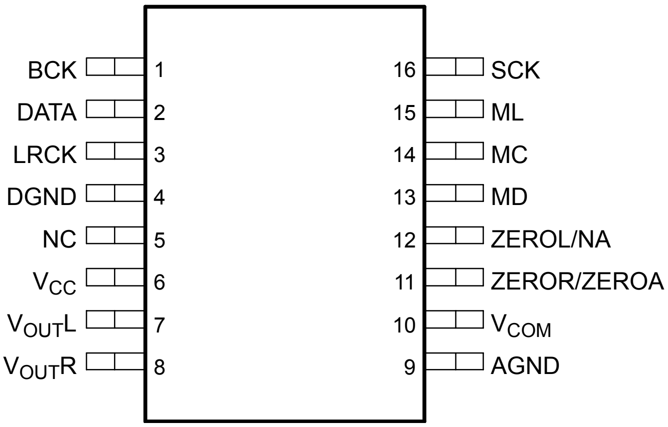
NO	FUNCTION
1~6	Parallel Converts Data Output Terminals
7	GND
8~13	Parallel Converts Data Output Terminals
14	Serial Data Output Terminal
15	Serial Data Output Terminal
16	Clock Signal Input Terminal
17	Strove Signal Input Terminal
18	Clear Signal Input Terminal
19,20	Parallel Converts Data Output Terminals
21	GND
22~27	Parallel Converts Data Output Terminals
28	Power Supply Terminal

* BLOCK DIAGRAM

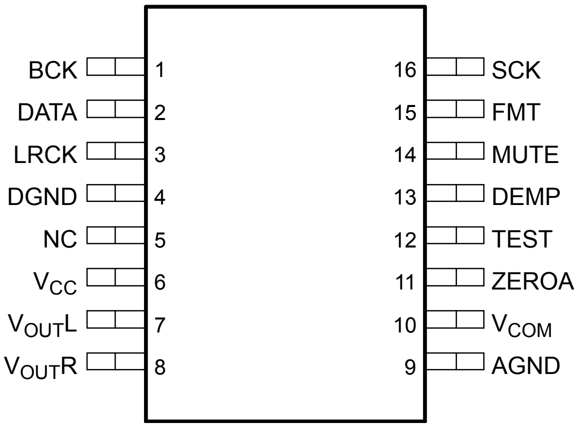

DATA
CLK
Shift Register
Latch Circuit
P1
P2
P3
P4
P5
P19
P20
SO
STB
CLR
Controller Circuit

PIN ASSIGNMENTS < IC51 >

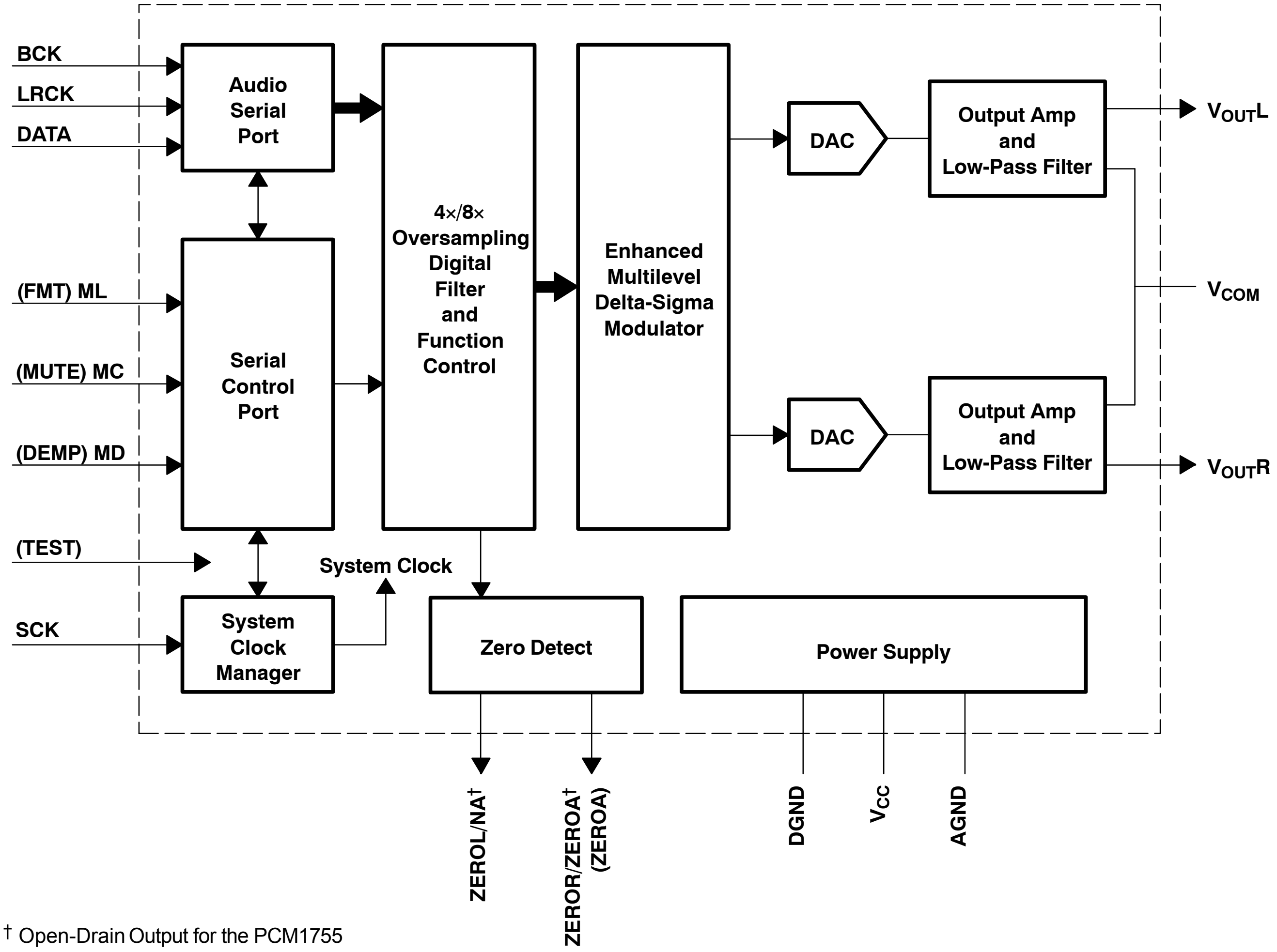
PCM1753/PCM1755
(TOP VIEW)


BCK 1
DATA 2
LRCK 3
DGND 4
NC 5
V_{CC} 6
$V_{OUT}L$ 7
$V_{OUT}R$ 8
16 SCK
15 ML
14 MC
13 MD
12 ZEROL/NA
11 ZEROR/ZEROA
10 V_{COM}
9 AGND

PCM1754
(TOP VIEW)


BCK 1
DATA 2
LRCK 3
DGND 4
NC 5
V_{CC} 6
$V_{OUT}L$ 7
$V_{OUT}R$ 8
16 SCK
15 FMT
14 MUTE
13 DEMP
12 TEST
11 ZEROA
10 V_{COM}
9 AGND

FUNCTIONAL BLOCK DIAGRAM


BCK
LRCK
DATA
Audio Serial Port
4×/8× Oversampling Digital Filter and Function Control
Enhanced Multilevel Delta-Sigma Modulator
DAC
Output Amp and Low-Pass Filter
$V_{OUT}L$
V_{COM}
DAC
Output Amp and Low-Pass Filter
$V_{OUT}R$
(FMT) ML
(MUTE) MC
(DEMP) MD
Serial Control Port
(TEST)
System Clock
SCK
System Clock Manager
Zero Detect
Power Supply
ZEROL/NA†
ZEROR/ZEROA† (ZEROA)
DGND
V_{CC}
AGND

† Open-Drain Output for the PCM1755

( ): PCM1754

Terminal Functions

TERMINAL NAME	NO.	I/O	DESCRIPTION
PCM1753/PCM1755			
AGND	9	–	Analog ground
BCK	1	I	Audio data bit clock input
DATA	2	I	Audio data digital input
DGND	4	–	Digital ground
LRCK	3	I	L-channel and R-channel audio data latch enable input
MC	14	I	Mode control clock input(1)
MD	13	I	Mode control data input (1)
ML	15	I	Mode control latch input (1)
NC	5	–	
SCK	16	I	System clock input
V_{CC}	6	–	Analog power supply, 5 V
V_{COM}	10	–	Common voltage decoupling
V_{OUT}L	7	O	Analog output for L-channel
V_{OUT}R	8	O	Analog output for R-channel
ZEROR/ZEROA	11	O	Zero flag output for R-channel/Zero flag output for L-/R-channels (2)
ZEROL/NA	12	O	Zero flag output for L-channel/Not assigned (2)
PCM1754			
AGND	9	–	Analog ground
BCK	1	I	Audio-data bit-clock input
DATA	2	I	Audio-data digital input
DEMP	13	I	De-emphasis control (1)
DGND	4	–	Digital ground
FMT	15	I	Data format select (1)
LRCK	3	I	L-channel and R-channel audio data latch enable input
MUTE	14	I	Analog mixing control (1)
NC	5	–	
SCK	16	I	System clock input
TEST	12	I	Test pin. Ground or open (1)
V_{CC}	6	–	Analog power supply, 5 V
V_{COM}	10	–	Common voltage decoupling
V_{OUT}L	7	O	Analog output for L-channel
V_{OUT}R	8	O	Analog output for R-channel
ZEROA	11	O	Zero flag output for L/R channels

(1) Schmitt-trigger input with internal pulldown.
(2) Open-drain output (PCM1755).

PIN ASSIGNMENT

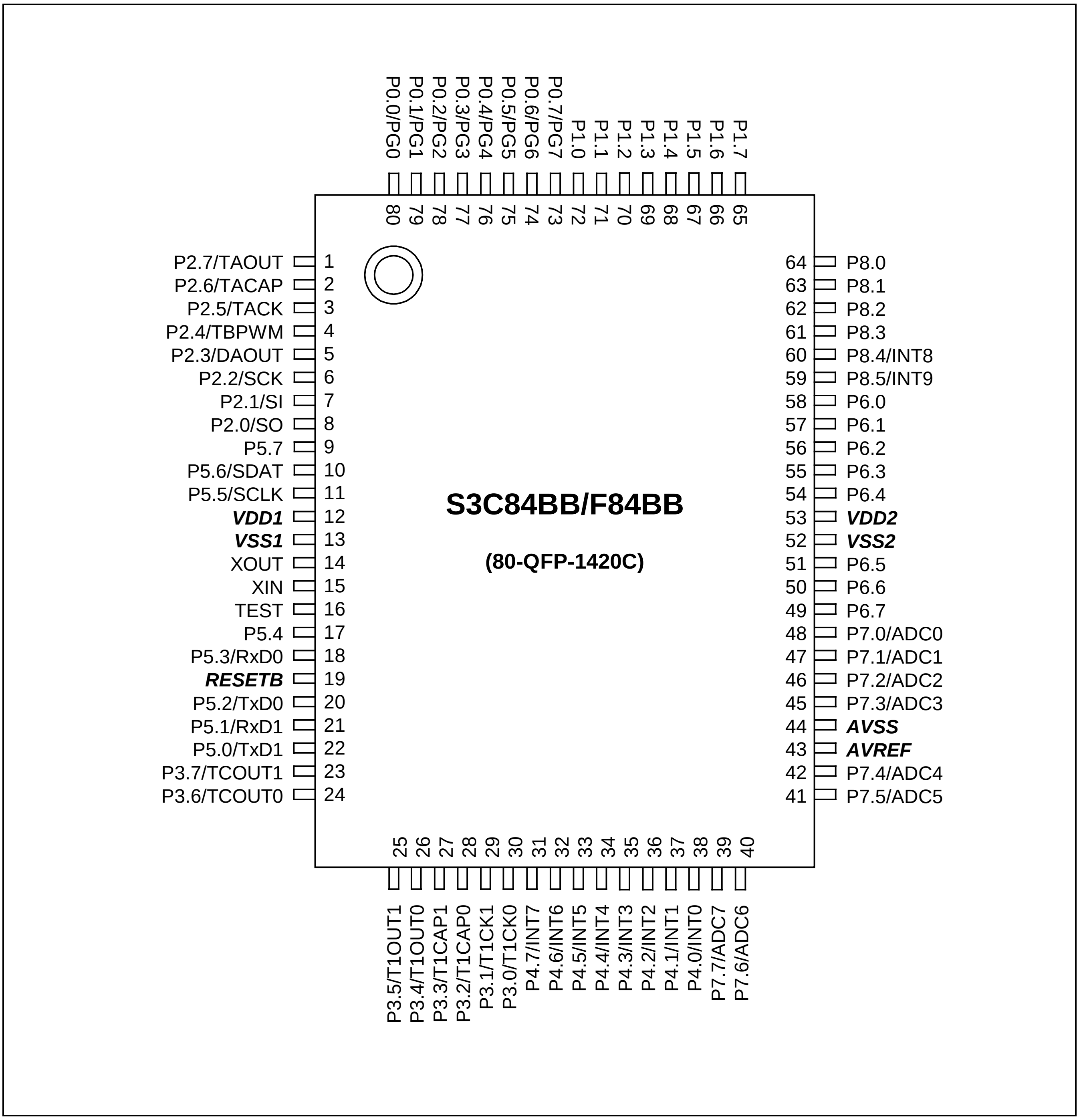

S3C84BB/F84BB
(80-QFP-1420C)
P2.7/TAOUT 1
P2.6/TACAP 2
P2.5/TACK 3
P2.4/TBPWM 4
P2.3/DAOUT 5
P2.2/SCK 6
P2.1/SI 7
P2.0/SO 8
P5.7 9
P5.6/SDAT 10
P5.5/SCLK 11
VDD1 12
VSS1 13
XOUT 14
XIN 15
TEST 16
P5.4 17
P5.3/RxD0 18
RESETB 19
P5.2/TxD0 20
P5.1/RxD1 21
P5.0/TxD1 22
P3.7/TCOUT1 23
P3.6/TCOUT0 24
25 P3.5/T1OUT1
26 P3.4/T1OUT0
27 P3.3/T1CAP1
28 P3.2/T1CAP0
29 P3.1/T1CK1
30 P3.0/T1CK0
31 P4.7/INT7
32 P4.6/INT6
33 P4.5/INT5
34 P4.4/INT4
35 P4.3/INT3
36 P4.2/INT2
37 P4.1/INT1
38 P4.0/INT0
39 P7.7/ADC7
40 P7.6/ADC6
41 P7.5/ADC5
42 P7.4/ADC4
43 AVREF
44 AVSS
45 P7.3/ADC3
46 P7.2/ADC2
47 P7.1/ADC1
48 P7.0/ADC0
49 P6.7
50 P6.6
51 P6.5
52 VSS2
53 VDD2
54 P6.4
55 P6.3
56 P6.2
57 P6.1
58 P6.0
59 P8.5/INT9
60 P8.4/INT8
61 P8.3
62 P8.2
63 P8.1
64 P8.0
65 P1.7
66 P1.6
67 P1.5
68 P1.4
69 P1.3
70 P1.2
71 P1.1
72 P1.0
73 P0.7/PG7
74 P0.6/PG6
75 P0.5/PG5
76 P0.4/PG4
77 P0.3/PG3
78 P0.2/PG2
79 P0.1/PG1
80 P0.0/PG0

Figure 1-2. S3C84BB/F84BB Pin Assignment (80-QFP)

BLOCK DIAGRAM

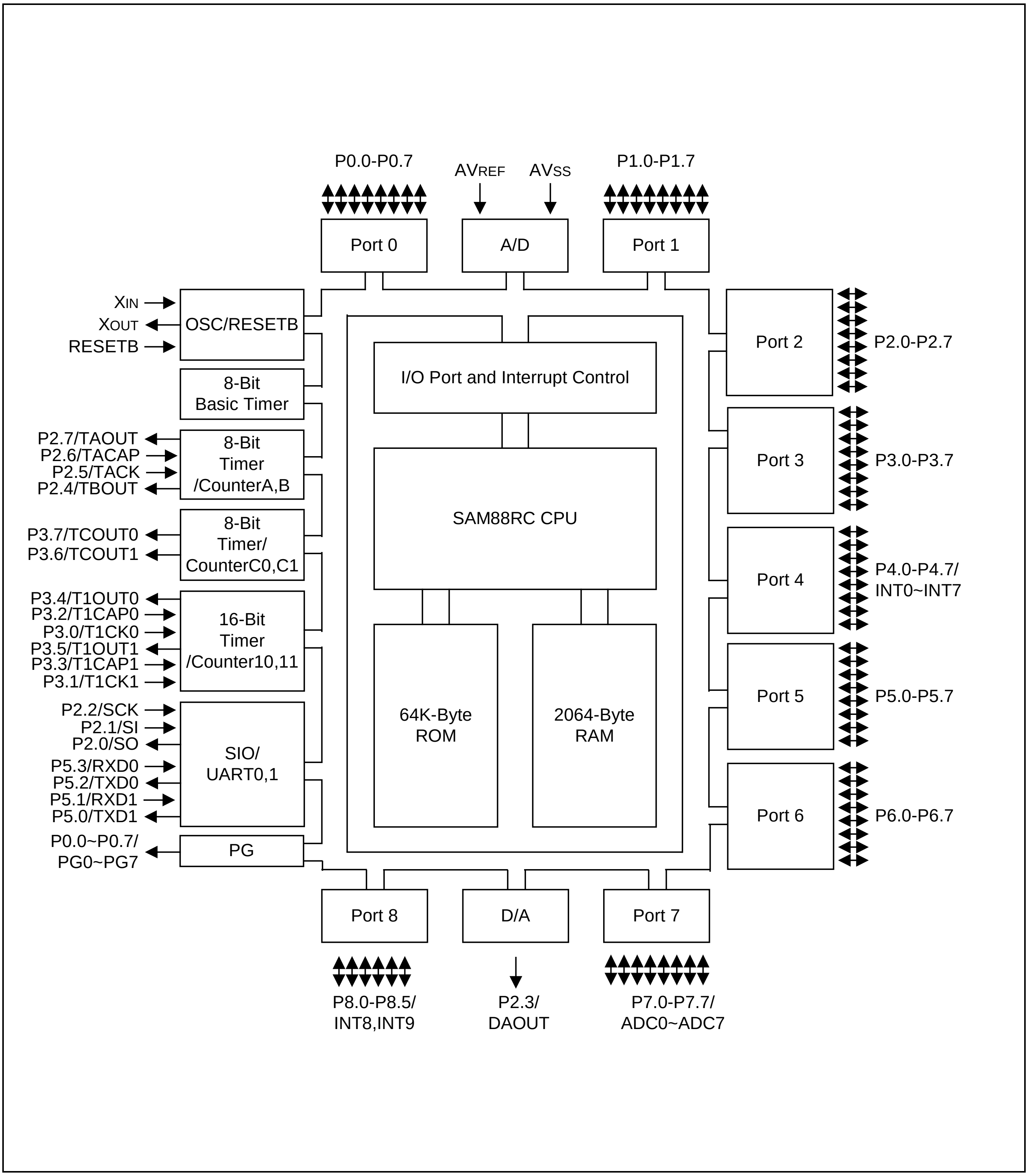

P0.0-P0.7
AVREF
AVSS
P1.0-P1.7
Port 0
A/D
Port 1
XIN
XOUT
RESETB
OSC/RESETB
8-Bit
Basic Timer
P2.7/TAOUT
P2.6/TACAP
P2.5/TACK
P2.4/TBOUT
8-Bit
Timer
/CounterA,B
P3.7/TCOUT0
P3.6/TCOUT1
8-Bit
Timer/
CounterC0,C1
P3.4/T1OUT0
P3.2/T1CAP0
P3.0/T1CK0
P3.5/T1OUT1
P3.3/T1CAP1
P3.1/T1CK1
16-Bit
Timer
/Counter10,11
P2.2/SCK
P2.1/SI
P2.0/SO
P5.3/RXD0
P5.2/TXD0
P5.1/RXD1
P5.0/TXD1
SIO/
UART0,1
P0.0~P0.7/
PG0~PG7
PG
I/O Port and Interrupt Control
SAM88RC CPU
64K-Byte
ROM
2064-Byte
RAM
Port 2
P2.0-P2.7
Port 3
P3.0-P3.7
Port 4
P4.0-P4.7/
INT0~INT7
Port 5
P5.0-P5.7
Port 6
P6.0-P6.7
Port 8
D/A
Port 7
P8.0-P8.5/
INT8,INT9
P2.3/
DAOUT
P7.0-P7.7/
ADC0~ADC7

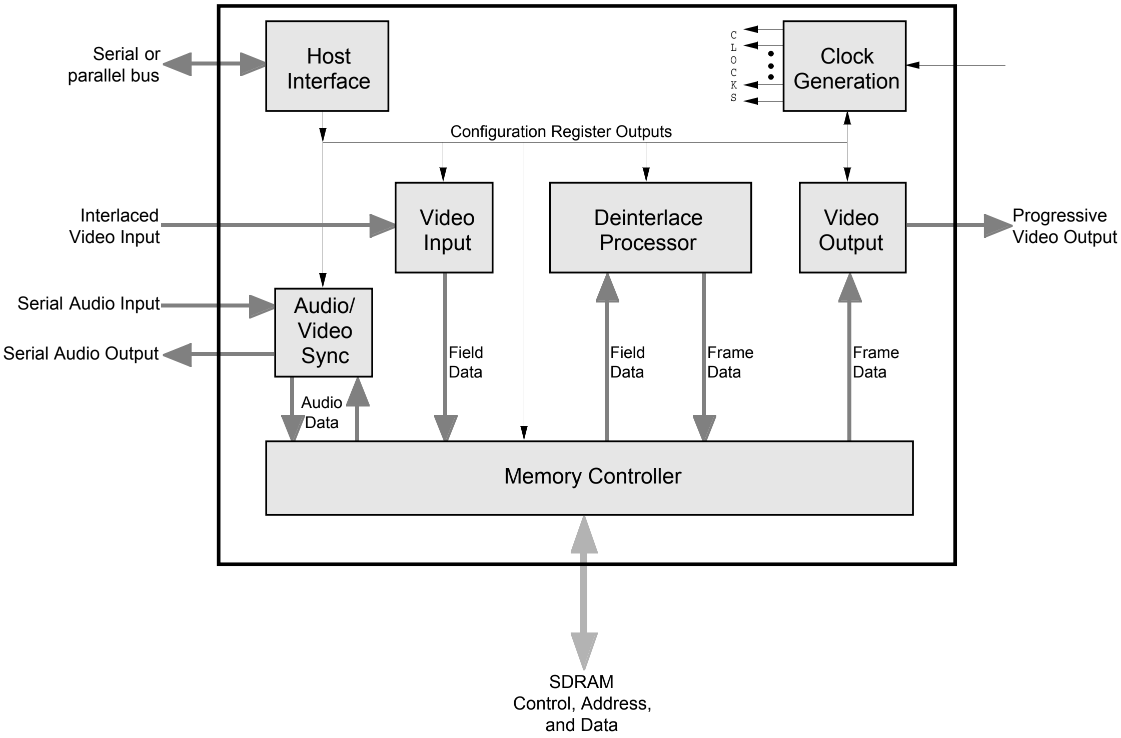
Figure 1-1. S3C84BB/F84BB Block Diagram

IC42 S3F84BB (FLASH MICOM)

PIN No.	NAME	I/O	DESCRIPTION
5	VFD_CS	O	VFD STB port
6	VFD_CLK	O	VFD Clock port
8	VFD_DATA	O	VFD data port
10	DATA	I	UPDATE data port
11	CLK	I	UPDATE clock port
12	VDD 1	–	Power input port
13	VSS 1	–	GND
14	X OUT	–	10MHz Crystal Connection port
15	X IN	–	
16	TEST	I	Pull – down register connected internally
19	VFD_RESET	I	VFD Reset port
27	DATA 4	I	FIP data in/out port
28	DATA 3	I	FIP data input port
29	DATA 2	I	
30	DATA 1	I	FIP data output port
31	CS	I	FIP driver IC(IC42) chip enable port
32	CLK	I	FIP driver IC(IC42) clock in/out port
43	AVREF	–	A/D converter reference voltage
44	AVSS	–	A/D converter ground
52	VSS 2	–	Power input port
53	VDD 2	–	GND

SiI 504 : IC21

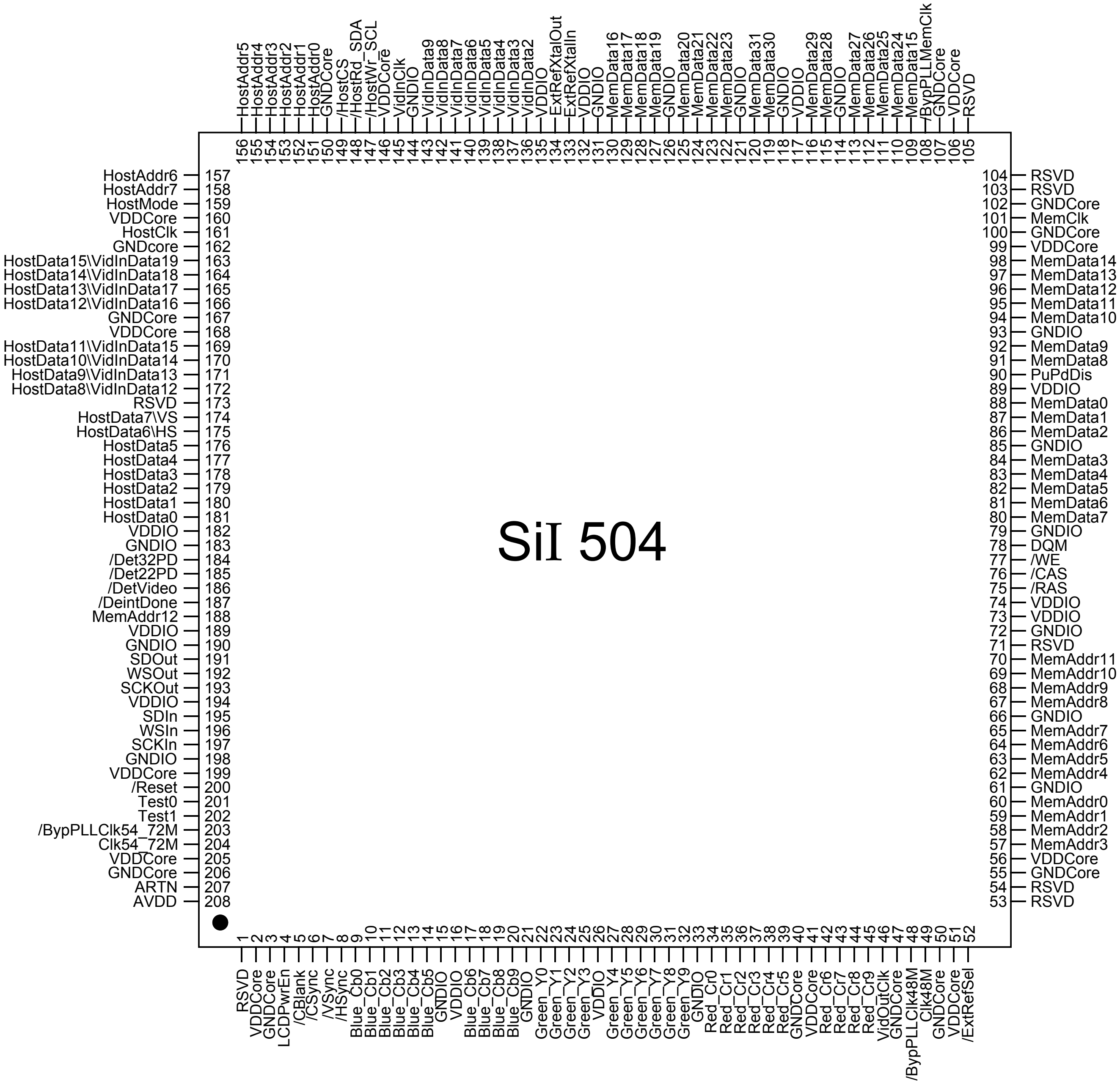
BLOCK DIAGRAM


Serial or
parallel bus
Host Interface
CLOCKS
Clock Generation
Configuration Register Outputs
Interlaced Video Input
Video Input
Deinterlace Processor
Video Output
Progressive Video Output
Serial Audio Input
Serial Audio Output
Audio/ Video Sync
Audio Data
Field Data
Field Data
Frame Data
Frame Data
Memory Controller
SDRAM
Control, Address,
and Data

2.1 Pin Numbers

Pin #	Signal Name	Pin #	Signal Name	Pin #	Signal Name	Pin #	Signal Name
1	Reserved	53	Reserved	105	Reserved	157	HostAddr6
2	VDDCore	54	Reserved	106	VDDCore	158	HostAddr7
3	GNDCore	55	GNDCore	107	GNDCore	159	HostMode
4	LCDPwrEn	56	VDDCore	108	/BypPLLMemClk	160	VDDCore
5	/CBlank	57	MemAddr3	109	MemData15	161	HostClk
6	/CSync	58	MemAddr2	110	MemData24	162	GNDCore
7	/VSync	59	MemAddr1	111	MemData25	163	HostData15\VidInData19
8	/HSync	60	MemAddr0	112	MemData26	164	HostData14\VidInData18
9	Blue_Cb0	61	GNDIO	113	MemData27	165	HostData13\VidInData17
10	Blue_Cb1	62	MemAddr4	114	GNDIO	166	HostData12\VidInData16
11	Blue_Cb2	63	MemAddr5	115	MemData28	167	GNDCore
12	Blue_Cb3	64	MemAddr6	116	MemData29	168	VDDCore
13	Blue_Cb4	65	MemAddr7	117	VDDIO	169	HostData11\VidInData15
14	Blue_Cb5	66	GNDIO	118	GNDIO	170	HostData10\VidInData14
15	GNDIO	67	MemAddr8	119	MemData30	171	HostData9\VidInData13
16	VDDIO	68	MemAddr9	120	MemData31	172	HostData8\VidInData12
17	Blue_Cb6	69	MemAddr10	121	GNDIO	173	Reserved
18	Blue_Cb7	70	MemAddr11	122	MemData23	174	HostData7\VS
19	Blue_Cb8	71	Reserved	123	MemData22	175	HostData6\HS
20	Blue_Cb9	72	GNDIO	124	MemData21	176	HostData5
21	GNDIO	73	VDDIO	125	MemData20	177	HostData4
22	Green_Y0	74	VDDIO	126	GNDIO	178	HostData3
23	Green_Y1	75	/RAS	127	MemData19	179	HostData2
24	Green_Y2	76	/CAS	128	MemData18	180	HostData1
25	Green_Y3	77	/WE	129	MemData17	181	HostData0
26	VDDIO	78	DQM	130	MemData16	182	VDDIO
27	Green_Y4	79	GNDIO	131	GNDIO	183	GNDIO
28	Green_Y5	80	MemData7	132	VDDIO	184	/Det32PD
29	Green_Y6	81	MemData6	133	ExtRefXtalIn	185	/Det22PD
30	Green_Y7	82	MemData5	134	ExtRefXtalOut	186	/DetVideo
31	Green_Y8	83	MemData4	135	VDDIO	187	/DeintDone
32	Green_Y9	84	MemData3	136	VidInData2	188	MemAddr12
33	GNDIO	85	GNDIO	137	VidInData3	189	VDDIO
34	Red_Cr0	86	MemData2	138	VidInData4	190	GNDIO
35	Red_Cr1	87	MemData1	139	VidInData5	191	SDOut
36	Red_Cr2	88	MemData0	140	VidInData6	192	WSOut
37	Red_Cr3	89	VDDIO	141	VidInData7	193	SCKOut
38	Red_Cr4	90	PuPdDis	142	VidInData8	194	VDDIO
39	Red_Cr5	91	MemData8	143	VidInData9	195	SDIn
40	GNDCore	92	MemData9	144	GNDIO	196	WSIn
41	VDDCore	93	GNDIO	145	VidInClk	197	SCKIn
42	Red_Cr6	94	MemData10	146	VDDCore	198	GNDIO
43	Red_Cr7	95	MemData11	147	/HostWr_SCL	199	VDDCore
44	Red_Cr8	96	MemData12	148	/HostRd_SDA	200	/Reset
45	Red_Cr9	97	MemData13	149	/HostCS	201	Test0
46	VidOutClk	98	MemData14	150	GNDCore	202	Test1
47	GNDCore	99	VDDCore	151	HostAddr0	203	/BypPLLClk54_72M
48	/BypPLLClk48M	100	GNDCore	152	HostAddr1	204	Clk54_72M
49	Clk48M	101	MemClk	153	HostAddr2	205	VDDCore
50	GNDCore	102	GNDCore	154	HostAddr3	206	GNDCore
51	VDDCore	103	Reserved	155	HostAddr4	207	ARTN
52	/ExtRefSel	104	Reserved	156	HostAddr5	208	AVDD

2.2 Pinout Diagram

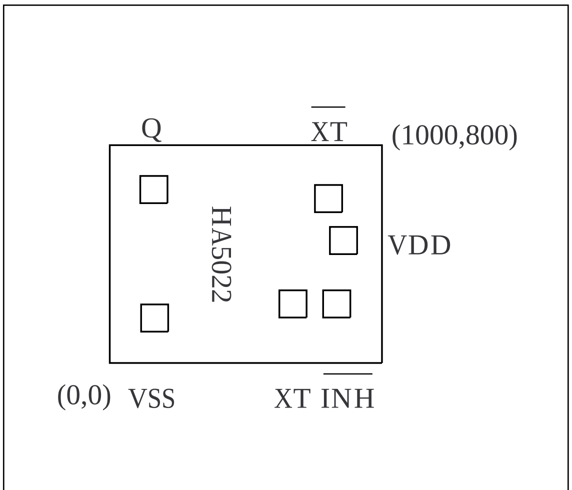

SiI 504
156 HostAddr5
155 HostAddr4
154 HostAddr3
153 HostAddr2
152 HostAddr1
151 HostAddr0
150 GNDCore
149 /HostCS
148 /HostRd_SDA
147 /HostWr_SCL
146 VDDCore
145 VidInClk
144 GNDIO
143 VidInData9
142 VidInData8
141 VidInData7
140 VidInData6
139 VidInData5
138 VidInData4
137 VidInData3
136 VidInData2
135 VDDIO
134 ExtRefXtalOut
133 ExtRefXtalIn
132 VDDIO
131 GNDIO
130 MemData16
129 MemData17
128 MemData18
127 MemData19
126 GNDIO
125 MemData20
124 MemData21
123 MemData22
122 MemData23
121 GNDIO
120 MemData31
119 MemData30
118 GNDIO
117 VDDIO
116 MemData29
115 MemData28
114 GNDIO
113 MemData27
112 MemData26
111 MemData25
110 MemData24
109 MemData15
108 /BypPLLMemClk
107 GNDCore
106 VDDCore
105 RSVD
HostAddr6 157
HostAddr7 158
HostMode 159
VDDCore 160
HostClk 161
GNDcore 162
HostData15\VidInData19 163
HostData14\VidInData18 164
HostData13\VidInData17 165
HostData12\VidInData16 166
GNDCore 167
VDDCore 168
HostData11\VidInData15 169
HostData10\VidInData14 170
HostData9\VidInData13 171
HostData8\VidInData12 172
RSVD 173
HostData7\VS 174
HostData6\HS 175
HostData5 176
HostData4 177
HostData3 178
HostData2 179
HostData1 180
HostData0 181
VDDIO 182
GNDIO 183
/Det32PD 184
/Det22PD 185
/DetVideo 186
/DeintDone 187
MemAddr12 188
VDDIO 189
GNDIO 190
SDOut 191
WSOut 192
SCKOut 193
VDDIO 194
SDIn 195
WSIn 196
SCKIn 197
GNDIO 198
VDDCore 199
/Reset 200
Test0 201
Test1 202
/BypPLLClk54_72M 203
Clk54_72M 204
VDDCore 205
GNDCore 206
ARTN 207
AVDD 208
104 RSVD
103 RSVD
102 GNDCore
101 MemClk
100 GNDCore
99 VDDCore
98 MemData14
97 MemData13
96 MemData12
95 MemData11
94 MemData10
93 GNDIO
92 MemData9
91 MemData8
90 PuPdDis
89 VDDIO
88 MemData0
87 MemData1
86 MemData2
85 GNDIO
84 MemData3
83 MemData4
82 MemData5
81 MemData6
80 MemData7
79 GNDIO
78 DQM
77 /WE
76 /CAS
75 /RAS
74 VDDIO
73 VDDIO
72 GNDIO
71 RSVD
70 MemAddr11
69 MemAddr10
68 MemAddr9
67 MemAddr8
66 GNDIO
65 MemAddr7
64 MemAddr6
63 MemAddr5
62 MemAddr4
61 GNDIO
60 MemAddr0
59 MemAddr1
58 MemAddr2
57 MemAddr3
56 VDDCore
55 GNDCore
54 RSVD
53 RSVD
1 RSVD
2 VDDCore
3 GNDCore
4 LCDPwrEn
5 /CBlank
6 /CSync
7 /VSync
8 /HSync
9 Blue_Cb0
10 Blue_Cb1
11 Blue_Cb2
12 Blue_Cb3
13 Blue_Cb4
14 Blue_Cb5
15 GNDIO
16 VDDIO
17 Blue_Cb6
18 Blue_Cb7
19 Blue_Cb8
20 Blue_Cb9
21 GNDIO
22 Green_Y0
23 Green_Y1
24 Green_Y2
25 Green_Y3
26 VDDIO
27 Green_Y4
28 Green_Y5
29 Green_Y6
30 Green_Y7
31 Green_Y8
32 Green_Y9
33 GNDIO
34 Red_Cr0
35 Red_Cr1
36 Red_Cr2
37 Red_Cr3
38 Red_Cr4
39 Red_Cr5
40 GNDCore
41 VDDCore
42 Red_Cr6
43 Red_Cr7
44 Red_Cr8
45 Red_Cr9
46 VidOutClk
47 GNDCore
48 /BypPLLClk48M
49 Clk48M
50 GNDCore
51 VDDCore
52 /ExtRefSel

* SM5022A1H : IC55

SM5022 series

PAD LAYOUT

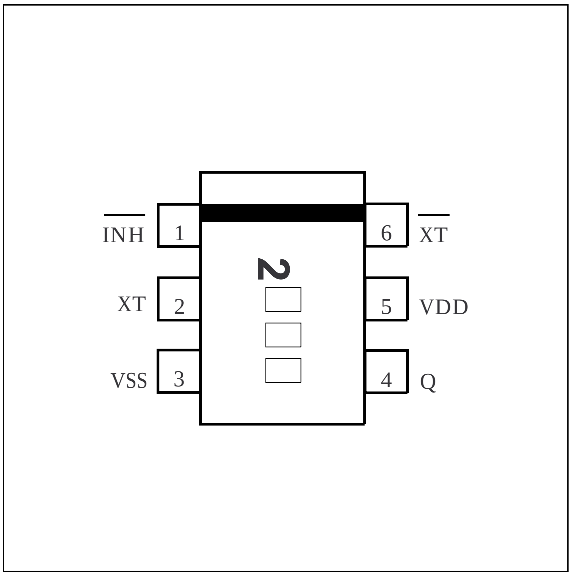
(Unit : µm)


Q
$\overline{\text{XT}}$
(1000,800)
HA5022
VDD
(0,0)
VSS
XT
$\overline{\text{INH}}$

Chip size: 1.00 × 0.80 mm
Chip thickness: 220 ± 30 µm
Chip base: V_{DD} level

PINOUT

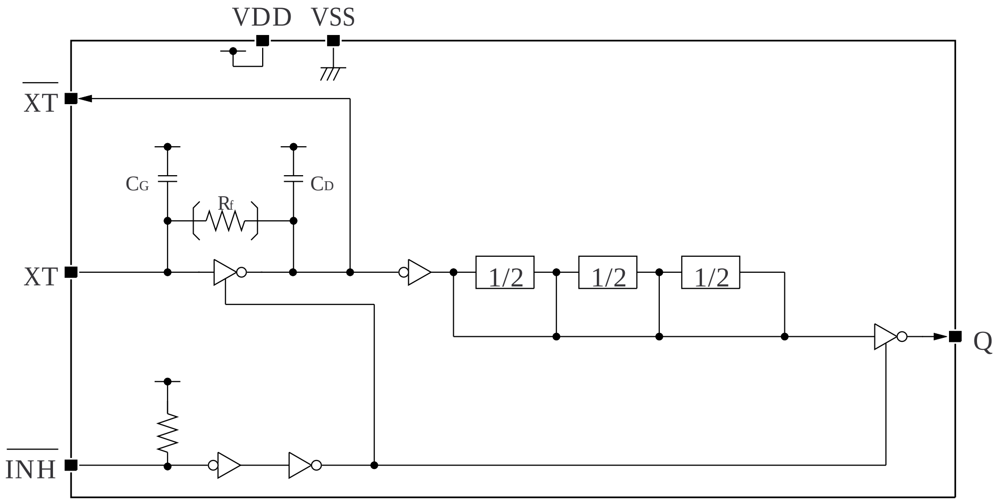
(Top View)


$\overline{\text{INH}}$
1
XT
2
VSS
3
6
$\overline{\text{XT}}$
5
VDD
4
Q
2

PIN DESCRIPTION and PAD DIMENSIONS

Number	Name	I/O	Description		Pad dimensions [µm]	
					X	Y
1	$\overline{\text{INH}}$	I	Output state control input. High impedance when LOW. Pull-up resistor built in		834	217
2	XT	I	Amplifier input.	Crystal oscillator connection pins. Crystal oscillator connected between XT and $\overline{\text{XT}}$	637	217
3	VSS	–	Ground		165	165
4	Q	O	Output. Output frequency (f_O, $f_O/2$, $f_O/4$, $f_O/8$) determined by internal connection		162	637
5	VDD	–	Supply voltage		859	450
6	$\overline{\text{XT}}$	O	Amplifier output.	Crystal oscillator connection pins. Crystal oscillator connected between XT and $\overline{\text{XT}}$	804	604

BLOCK DIAGRAM


VDD
VSS
$\overline{\text{XT}}$
C_G
R_f
C_D
XT
1/2
1/2
1/2
Q
$\overline{\text{INH}}$

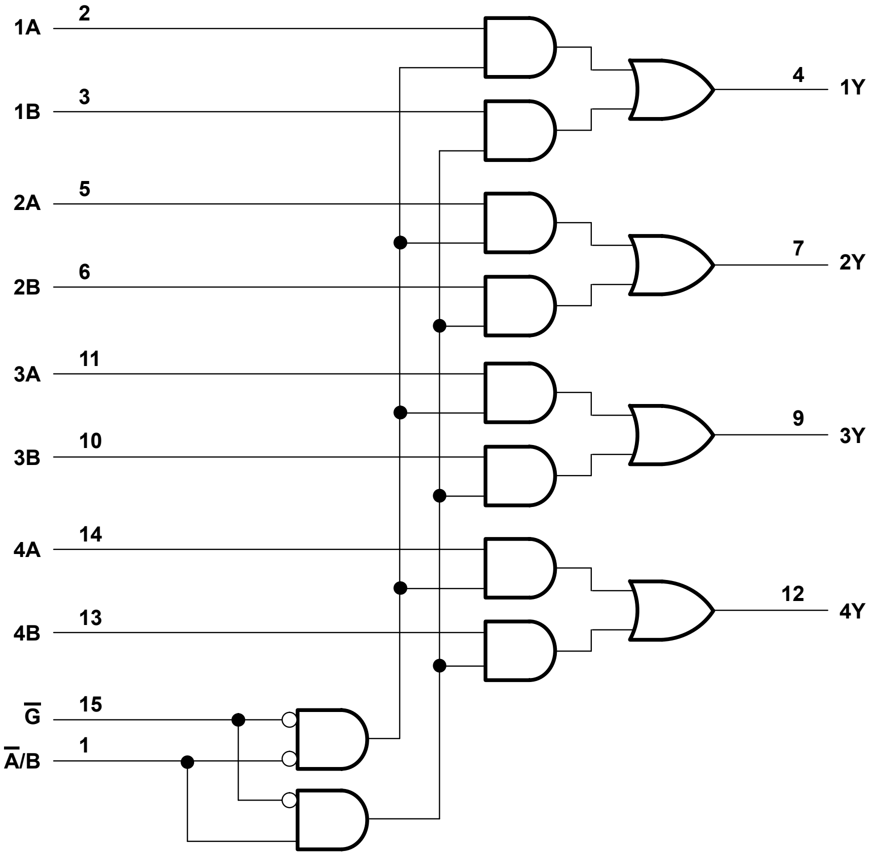
($\overline{\text{INH}}$: Low active)

SN74LVC157ADBR (IC47)
QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS

FUNCTION TABLE

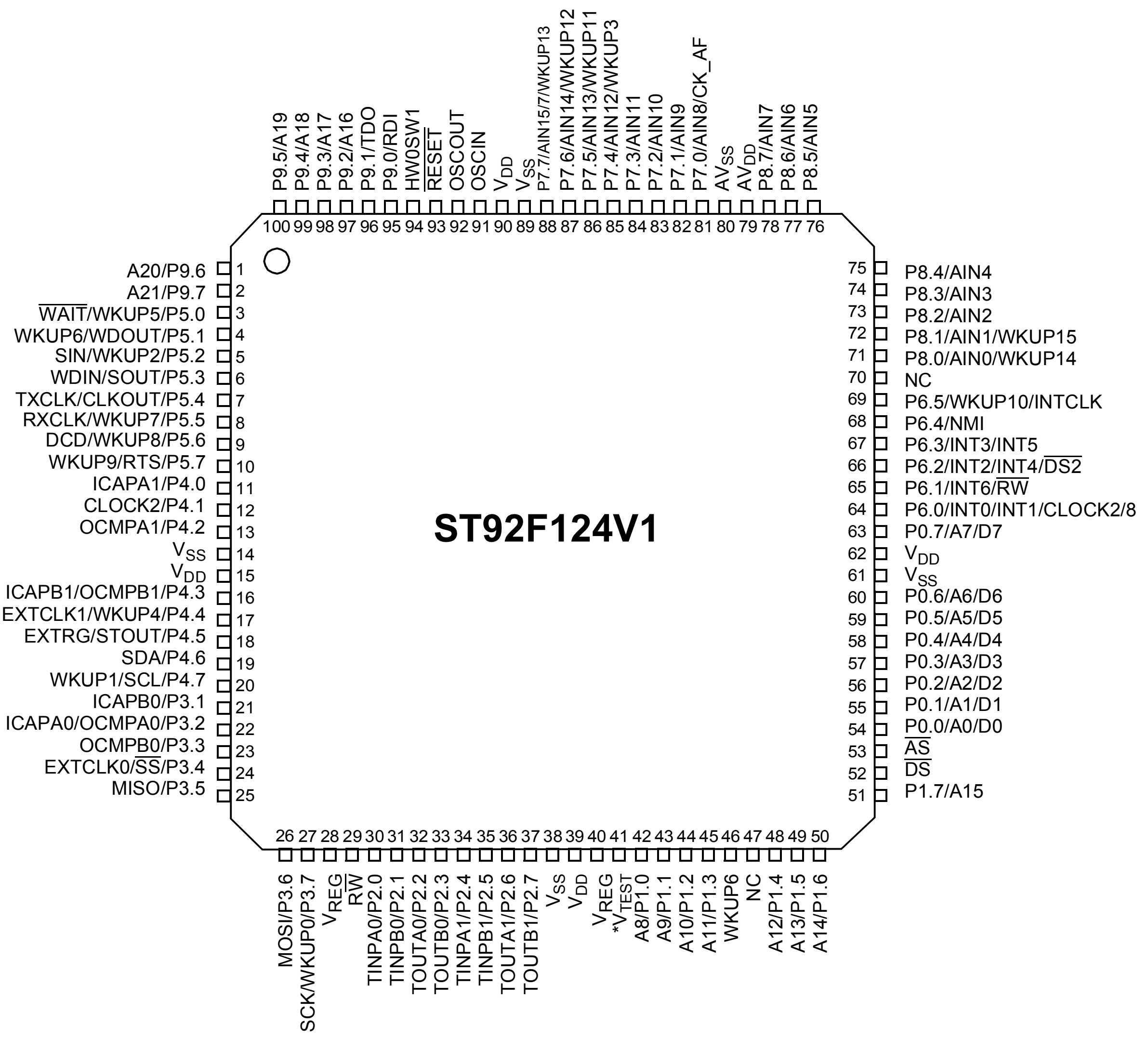
INPUTS				OUTPUT Y
$\overline{G}$	$\overline{A}$/B	A	B	
H	X	X	X	L
L	L	L	X	L
L	L	H	X	H
L	H	X	L	L
L	H	X	H	H

■ LOGIC DIAGRAM(POSITIVE LOGIC)


1A
2
1B
3
2A
5
2B
6
3A
11
3B
10
4A
14
4B
13
$\overline{G}$
15
$\overline{A}$/B
1
4
1Y
7
2Y
9
3Y
12
4Y

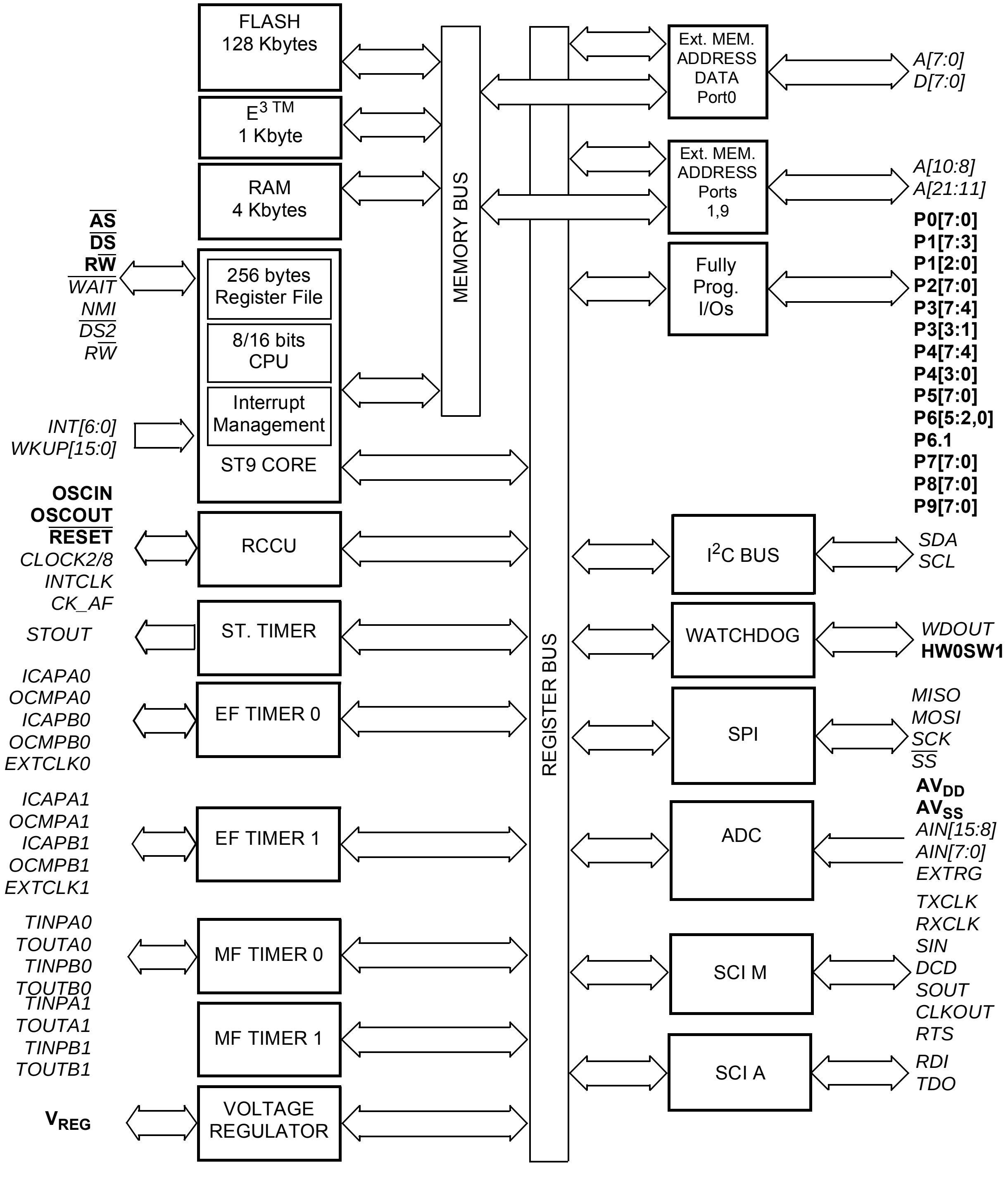
Pin numbers shown are for the D, DB, J, NS, PW, RGY, and W packages.

Figure 8. ST92F124V1: Pin Configuration (Top-view TQFP100)


ST92F124V1
100 P9.5/A19
99 P9.4/A18
98 P9.3/A17
97 P9.2/A16
96 P9.1/TDO
95 P9.0/RDI
94 HW0SW1
93 RESET
92 OSCOUT
91 OSCIN
90 V_{DD}
89 V_{SS}
88 P7.7/AIN15/7/WKUP13
87 P7.6/AIN14/WKUP12
86 P7.5/AIN13/WKUP11
85 P7.4/AIN12/WKUP3
84 P7.3/AIN11
83 P7.2/AIN10
82 P7.1/AIN9
81 P7.0/AIN8/CK_AF
80 AV_{SS}
79 AV_{DD}
78 P8.7/AIN7
77 P8.6/AIN6
76 P8.5/AIN5
1 A20/P9.6
2 A21/P9.7
3 WAIT/WKUP5/P5.0
4 WKUP6/WDOUT/P5.1
5 SIN/WKUP2/P5.2
6 WDIN/SOUT/P5.3
7 TXCLK/CLKOUT/P5.4
8 RXCLK/WKUP7/P5.5
9 DCD/WKUP8/P5.6
10 WKUP9/RTS/P5.7
11 ICAPA1/P4.0
12 CLOCK2/P4.1
13 OCMPA1/P4.2
14 V_{SS}
15 V_{DD}
16 ICAPB1/OCMPB1/P4.3
17 EXTCLK1/WKUP4/P4.4
18 EXTRG/STOUT/P4.5
19 SDA/P4.6
20 WKUP1/SCL/P4.7
21 ICAPB0/P3.1
22 ICAPA0/OCMPA0/P3.2
23 OCMPB0/P3.3
24 EXTCLK0/SS/P3.4
25 MISO/P3.5
75 P8.4/AIN4
74 P8.3/AIN3
73 P8.2/AIN2
72 P8.1/AIN1/WKUP15
71 P8.0/AIN0/WKUP14
70 NC
69 P6.5/WKUP10/INTCLK
68 P6.4/NMI
67 P6.3/INT3/INT5
66 P6.2/INT2/INT4/DS2
65 P6.1/INT6/RW
64 P6.0/INT0/INT1/CLOCK2/8
63 P0.7/A7/D7
62 V_{DD}
61 V_{SS}
60 P0.6/A6/D6
59 P0.5/A5/D5
58 P0.4/A4/D4
57 P0.3/A3/D3
56 P0.2/A2/D2
55 P0.1/A1/D1
54 P0.0/A0/D0
53 AS
52 DS
51 P1.7/A15
26 MOSI/P3.6
27 SCK/WKUP0/P3.7
28 V_{REG}
29 RW
30 TINPA0/P2.0
31 TINPB0/P2.1
32 TOUTA0/P2.2
33 TOUTB0/P2.3
34 TINPA1/P2.4
35 TINPB1/P2.5
36 TOUTA1/P2.6
37 TOUTB1/P2.7
38 V_{SS}
39 V_{DD}
40 V_{REG}
41 $*V_{TEST}$
42 A8/P1.0
43 A9/P1.1
44 A10/P1.2
45 A11/P1.3
46 WKUP6
47 NC
48 A12/P1.4
49 A13/P1.5
50 A14/P1.6

* V_{TEST} must be kept low in standard operating mode.

Figure 2. ST92F124V1: Architectural Block Diagram


FLASH
128 Kbytes
E3 TM
1 Kbyte
RAM
4 Kbytes
256 bytes Register File
8/16 bits CPU
Interrupt Management
ST9 CORE
MEMORY BUS
REGISTER BUS
Ext. MEM. ADDRESS DATA Port0
Ext. MEM. ADDRESS Ports 1,9
Fully Prog. I/Os
A[7:0]
D[7:0]
A[10:8]
A[21:11]
P0[7:0]
P1[7:3]
P1[2:0]
P2[7:0]
P3[7:4]
P3[3:1]
P4[7:4]
P4[3:0]
P5[7:0]
P6[5:2,0]
P6.1
P7[7:0]
P8[7:0]
P9[7:0]
AS
DS
RW
WAIT
NMI
DS2
RW
INT[6:0]
WKUP[15:0]
OSCIN
OSCOUT
RESET
CLOCK2/8
INTCLK
CK_AF
RCCU
STOUT
ST. TIMER
ICAPA0
OCMPA0
ICAPB0
OCMPB0
EXTCLK0
EF TIMER 0
ICAPA1
OCMPA1
ICAPB1
OCMPB1
EXTCLK1
EF TIMER 1
TINPA0
TOUTA0
TINPB0
TOUTB0
MF TIMER 0
TINPA1
TOUTA1
TINPB1
TOUTB1
MF TIMER 1
VREG
VOLTAGE REGULATOR
I2C BUS
SDA
SCL
WATCHDOG
WDOUT
HW0SW1
SPI
MISO
MOSI
SCK
SS
ADC
AVDD
AVSS
AIN[15:8]
AIN[7:0]
EXTRG
SCI M
TXCLK
RXCLK
SIN
DCD
SOUT
CLKOUT
RTS
SCI A
RDI
TDO

The alternate functions (*Italic characters*) are mapped on Port 0, Port 1, Port2, Port3, Port4, Port5, Port6, Port7, Port8 and Port9.

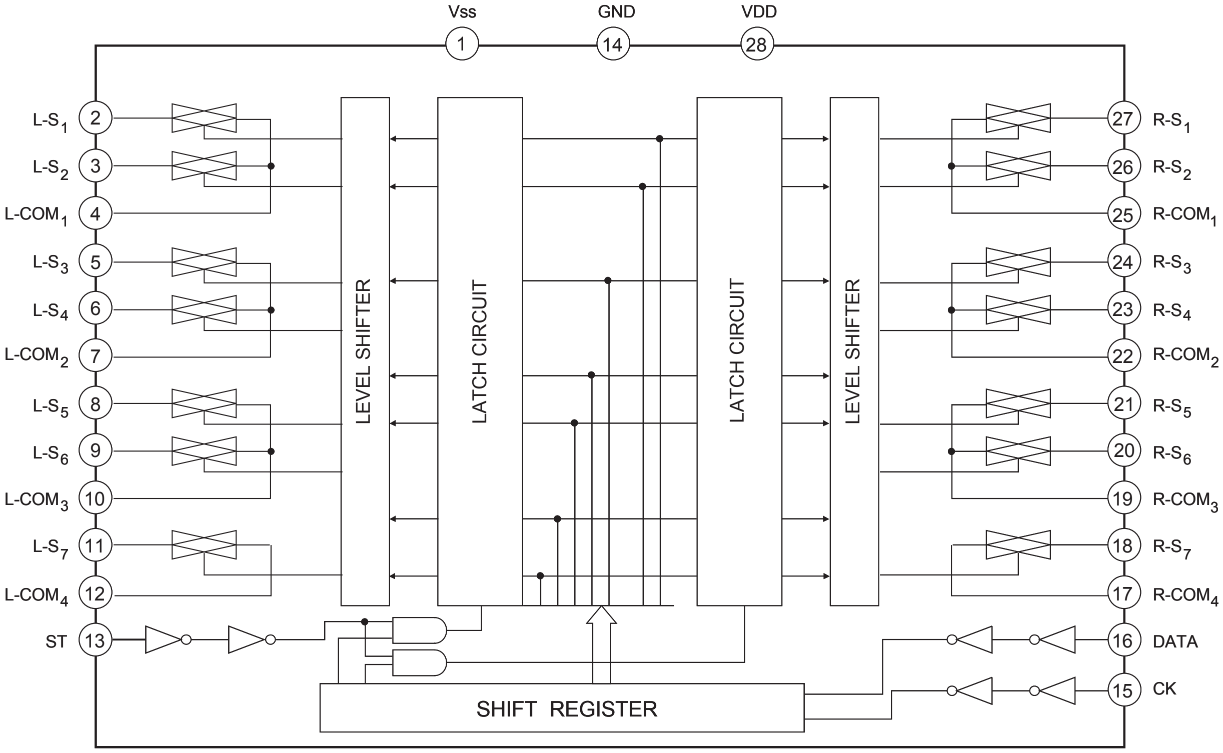
I.C PIN DESCRIPTIONS (FLASH U-COM : ST92F124) : IC21

PIN No	PIN Name	I/O	Function
1	SPK_ON	O	Speaker On port
2	AMP_MUTE	O	AMP Mute Port
3	EVOL_DA2	O	Electronic Volume Data2 Port.
4	EVOL_CK2	O	Electronic Volume Clock2 Port.
5	SIN	I	Micom update
6	SOUT	O	Micom update
7	TXCLK	O	Micom update TX
8	RXCLK	I	Micom update RX
9	VFD_CS	O	VFD Display Chip select port
10	VFD_CK	O	VFD Display Clock port
11	VFD_DATA1	O	VFD Display Data port1
12	VFD_DATA2	O	VFD Display Data port2
13	VFD_DATA3	O	VFD Display Data port3
14	GND1	-	GND Port1
15	VDD1	-	Power Supply Port1
16	VFD_DATA4	O	VFD Display Data port4
17	VFD_RST	O	VFD Display Reset port
18	SMPS_CLT	O	SMPS_Control port
19	I2C_DA	O	I2C Data port
20	I2C_CK	O	I2C Clock port
21	EXP_CE	O	External chip enable port
22	DVD_RESET	O	DVD Reset port
23	DVD_FREQ	O	DVD Request port
24	NC	-	No Connection
25	DVD_DATA	O	DVD Data port
26	DVD_RX	I	DVD Data IN port (RX)
27	DVD_TX	O	DVD Data OUT port (TX)
28	DVD_CLK	I	DVD Chip enable port
29	NC	-	No Connection
30	PLL_DOUT	I	PLL Data OUT port
31	TUNED	I	Tuner module TUNED control port
32	NC	-	No Connection
33	PLL_CE	O	PLL Chip enable port
34	STEREO	I	Tuner module STEREO control port
35	PLL/FUNC_DA	O	PLL/FUNCTION data output port
36	PLL/FUNC_CLK	O	PLL/FUNCTION clock output port
37	FUNC_CE	I	FUNCTION IC chip enable port
38	GND2	-	GND2
39	VDD2	-	Power Supply port2
40	VREG	-	Stabilization capacitor(s) for internal voltage regulator
41	VTEST	-	Must be kept low in standard operating mode
42	EVOL_CE	O	Electronic volume IC chip enable port
43	EVOL_DA	O	Electronic volume IC data port
44	EVOL_CK	O	Electronic volume IC clock port
45	RDS_DA	I	RDS data in port
46	NC	-	No Connection
47	NC	-	No Connection
48	CD_INTERRUPT	I	DIR+CODEC INTERRUPT port
49	DSP/CD_CLK	O	DSP/DIR+CODEC clock port
50	DSP/CD_DA	O	DSP/DIR+CODEC data out port
51	DATA_IN	I	DSP/DIR+CODEC data in port
52	NC	-	No Connection
53	NC	-	No Connection

54	DSP_RESET	I	DSP reset port
55	CD_RESET	I	DIR+CODEC reset port
56	CD_CS	I	DIR+CODEC chip selector port
57	HINBSY	I	HOST BUSY
58	DSP_C_CS	O	DSP C Chip selector port
59	DSP_AB_CS	O	DSP AB Chip selector port
60	INT_REQ	I	DSP interrupt request port
61	GND3	–	GND3
62	VDD3	–	Power Supply port3
63	FINTREQ	I	DSP interrupt request port
64	REMOTE_IN	I	System remote Input port
65	BACK_UP	I	BACK-UP port (active "L")
66	RDS_CLK	I	RDS Clock port
67	DVD_MREQ	I	DVD Main request port
68	OPTION1	I	* H : FM 50KHz step ,* L : FM 100KHz step
69	OPTION2	I	* H : AM 9KHz step ,* L : AM 10KHz step
70	NC	–	No Connection
71	KEY_IN1	I	KEY Data input port
72	KEY_IN2		
73	KEY_IN3		
74	VOL_B	I	JOG Data Input port(Master Volume)
75	VOL_A		
76	FUNC_A	I	Function control port
77	FUNC_B	I	Function control port
78	FAN_DET	I	Fan Detector port
79	AVDD	–	Analog Power Supply port
80	GND4	–	GND4
81	POWER_H	O	Power on control port (Active "H")
82	FUNC_MUTE	O	Function mute port
83	H/PHONE_IN	I	Headphone in port
84	OSDV_CE	O	OSD chip enable port
85	OSD_CV	O	Composite sync signal port
86	OSD_CLK	O	OSD Clock port
87	OSD_DA	O	OSD Data port
88	OSD_Y	I	Composite sync signal port
89	GND5	–	GND5
90	VDD4	–	Power Supply port4
91	OSC_IN	–	4MHz Crystal Connection port
92	OSCOUT	–	
93	RESET	I	Reset port
94	HW0SW1	–	Watchdog option port
95	OSDY_CE	O	OSD Chip enable
96	PROTECT_IN	I	Protect port
97	REC_MUTE	O	Recode mute port
98	DVDPW_ON	O	DVD Power ON port
99	DVDA_SEL	O	DVD Audio selector port
100	ROM_SEL	O	ROM Selector port

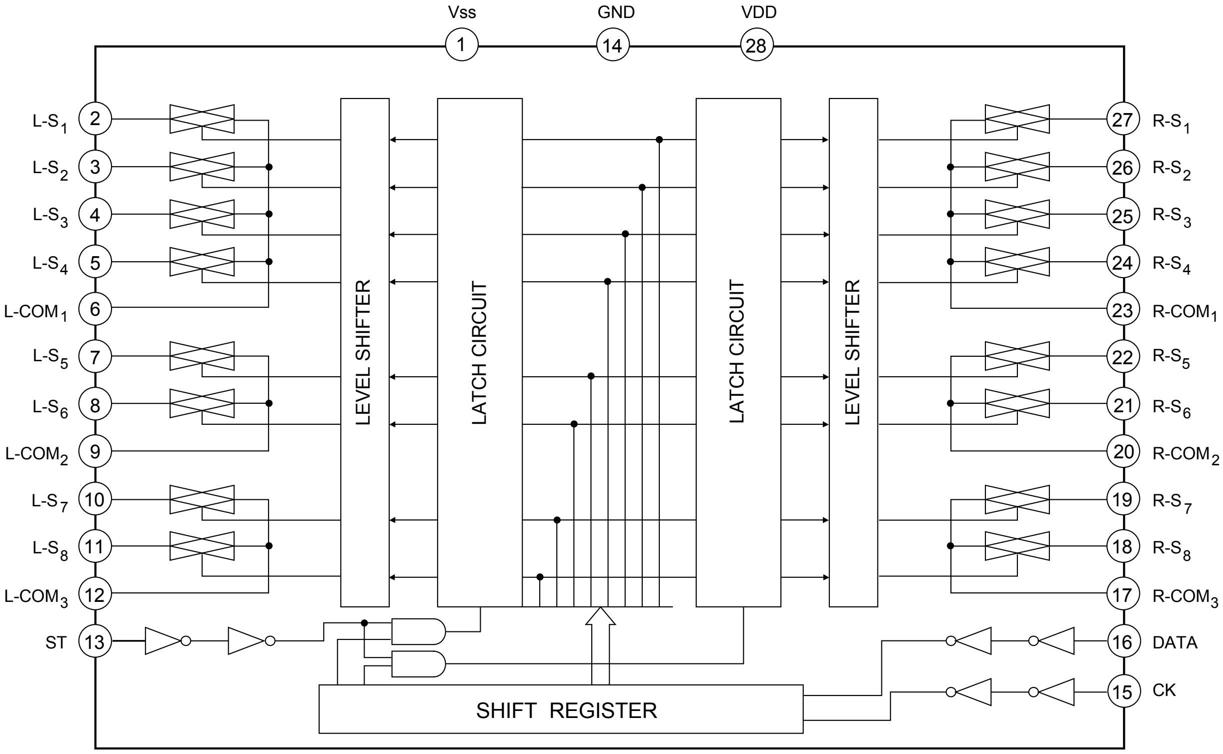
TC9162AF (FUNCTION/INPUT : IC12)

■ BLOCK DIAGRAM


Vss
GND
VDD
1
14
28
L-S1 2
L-S2 3
L-COM1 4
L-S3 5
L-S4 6
L-COM2 7
L-S5 8
L-S6 9
L-COM3 10
L-S7 11
L-COM4 12
ST 13
LEVEL SHIFTER
LATCH CIRCUIT
LATCH CIRCUIT
LEVEL SHIFTER
SHIFT REGISTER
27 R-S1
26 R-S2
25 R-COM1
24 R-S3
23 R-S4
22 R-COM2
21 R-S5
20 R-S6
19 R-COM3
18 R-S7
17 R-COM4
16 DATA
15 CK

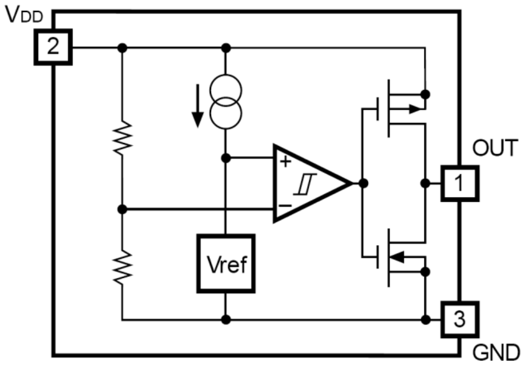
TC9164AF (FUNCTION/INPUT) : IC11

■ BLOCK DIAGRAM

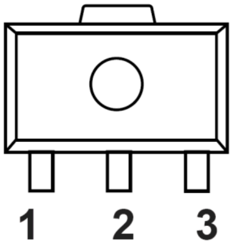

Vss
GND
VDD
1
14
28
L-S1 2
L-S2 3
L-S3 4
L-S4 5
L-COM1 6
L-S5 7
L-S6 8
L-COM2 9
L-S7 10
L-S8 11
L-COM3 12
ST 13
LEVEL SHIFTER
LATCH CIRCUIT
LATCH CIRCUIT
LEVEL SHIFTER
SHIFT REGISTER
27 R-S1
26 R-S2
25 R-S3
24 R-S4
23 R-COM1
22 R-S5
21 R-S6
20 R-COM2
19 R-S7
18 R-S8
17 R-COM3
16 DATA
15 CK

* RH5VT18C : IC24

BLOCK DIAGRAM


VDD
2
+
−
Vref
OUT
1
3
GND

• SOT-89

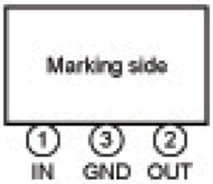


• SOT-89

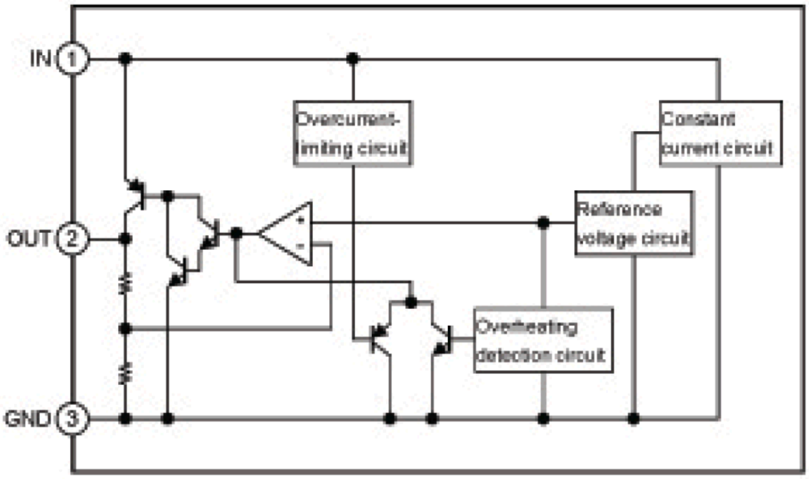
Pin No.	Symbol
1	OUT
2	VDD
3	GND

TA4802 (IC49), TA48033 (IC48) (2.5V/3.3V THREE TERMINAL LOW DROPOUT VOLTAGE REGULATOR 1A)

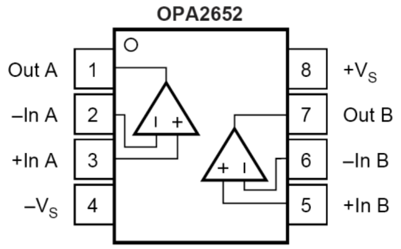
Pin Assignment


Marking side
1
3
2
IN
GND
OUT

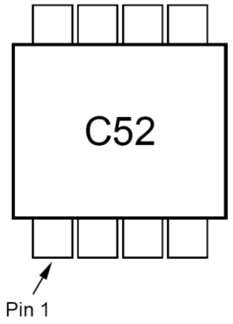
Block Diagram


IN 1
OUT 2
GND 3
Overcurrent-limiting circuit
Constant current circuit
Reference voltage circuit
Overheating detection circuit
+
−

* OPA2652 (OP-AMP) : IC86~IC88

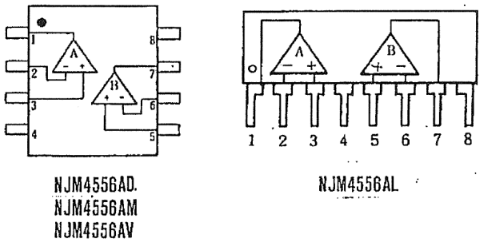

OPA2652
Out A 1
–In A 2
+In A 3
–V_S 4
8 +V_S
7 Out B
6 –In B
5 +In B

SOT23-8 Marking / Pin Orientation



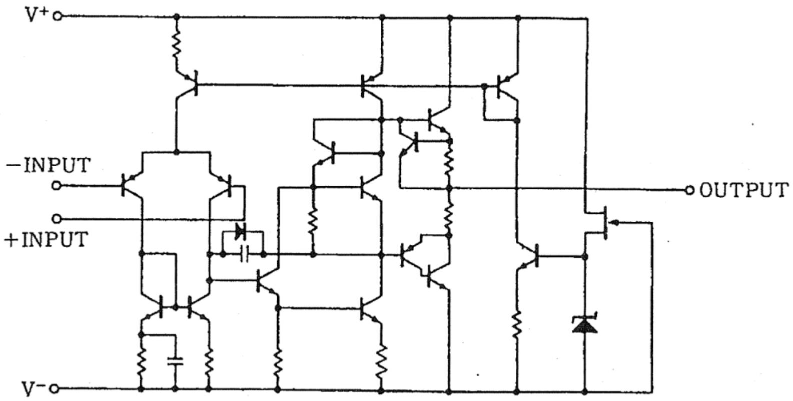
* NJM4556AL : IC78

■ PIN CONFIGURATION


1
2
3
4
5
6
7
8
A
B
NJM4556AD
NJM4556AM
NJM4556AV
NJM4556AL

PIN FUNCTION
1 . A OUTPUT
2 . A−INPUT
3 . A+INPUT
4 . V-
5 . B+INPUT
6 . B−INPUT
7 . B OUTPUT
8 . V+

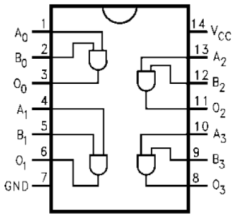
■ EQUIVALENT CIRCUIT (1/2 Shown)


V+
−INPUT
+INPUT
OUTPUT
V−

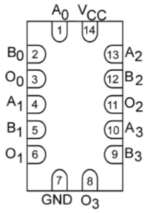
74LCX08 < IC43 , IC14 >

74LCX08

Pin Assignments for SOIC, SOP, and TSSOP


A0
B0
O0
A1
B1
O1
GND
1
2
3
4
5
6
7
14
13
12
11
10
9
8
VCC
A2
B2
O2
A3
B3
O3

Pad Assignments for DQFN


A0
VCC
1
14
B0 2
O0 3
A1 4
B1 5
O1 6
13 A2
12 B2
11 O2
10 A3
9 B3
7
8
GND
O3

(Top View)

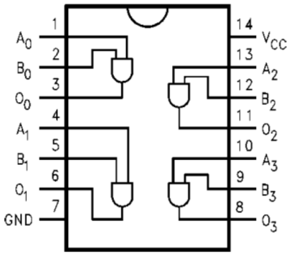
Pin Descriptions

Pin Names	Description
A_n, B_n	Inputs
O_n	Outputs

* 74VHCT08A : IC43

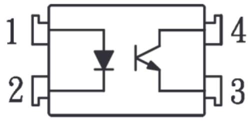
* PIN DESCRIPTION

Pin Names	Description
A_n, B_n	Inputs
O_n	Outputs


A0
B0
O0
A1
B1
O1
GND
1
2
3
4
5
6
7
14
13
12
11
10
9
8
VCC
A2
B2
O2
A3
B3
O3

* KP1010B : IC23

*BLOCK DIAGRAM

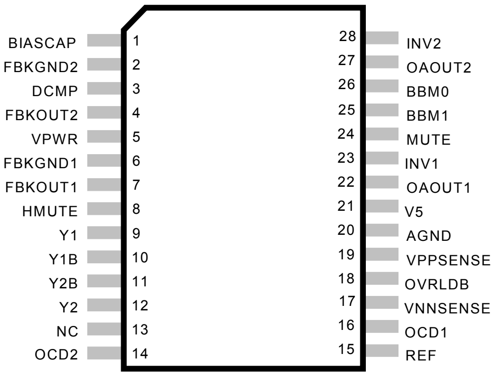


*PIN DESCRIPTION

1. ANODE
2. CATHODE
3. EMITTER
4. COLLECTOR

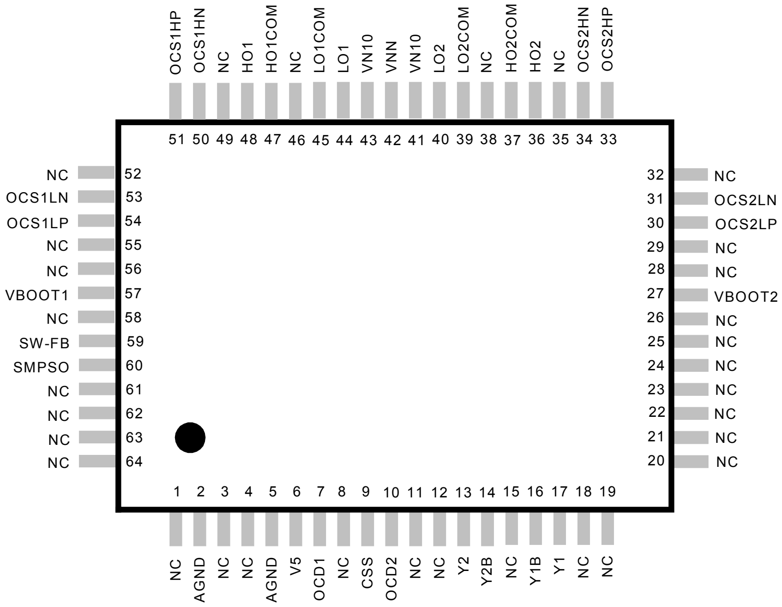
TC2001 Pinout (IC52,62,72,82)

28-pin SOIC
(Top View)


1 BIASCAP
2 FBKGND2
3 DCMP
4 FBKOUT2
5 VPWR
6 FBKGND1
7 FBKOUT1
8 HMUTE
9 Y1
10 Y1B
11 Y2B
12 Y2
13 NC
14 OCD2
15 REF
16 OCD1
17 VNNSENSE
18 OVRLDB
19 VPPSENSE
20 AGND
21 V5
22 OAOUT1
23 INV1
24 MUTE
25 BBM1
26 BBM0
27 OAOUT2
28 INV2

TP2150 Pinout (IC53,63,73,83)

64-pin LQFP
(Top View)


1 NC
2 AGND
3 NC
4 NC
5 AGND
6 V5
7 OCD1
8 NC
9 CSS
10 OCD2
11 NC
12 NC
13 Y2
14 Y2B
15 NC
16 Y1B
17 Y1
18 NC
19 NC
20 NC
21 NC
22 NC
23 NC
24 NC
25 NC
26 NC
27 VBOOT2
28 NC
29 NC
30 OCS2LP
31 OCS2LN
32 NC
33 OCS2HP
34 OCS2HN
35 NC
36 HO2
37 HO2COM
38 NC
39 LO2COM
40 LO2
41 VN10
42 VNN
43 VN10
44 LO1
45 LO1COM
46 NC
47 HO1COM
48 HO1
49 NC
50 OCS1HN
51 OCS1HP
52 NC
53 OCS1LN
54 OCS1LP
55 NC
56 NC
57 VBOOT1
58 NC
59 SW-FB
60 SMPSO
61 NC
62 NC
63 NC
64 NC

TC2001 Audio Signal Processor Pin Descriptions (IC52,62,72,82)

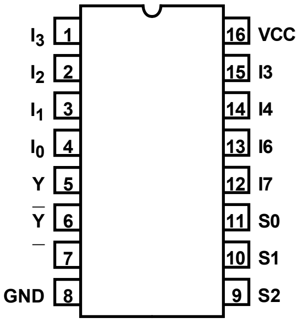
Pin	Function	Description
1	BIASCAP	Bandgap reference times two (typically 2.5VDC). Used to set the common mode voltage for the input op amps. This pin is not capable of driving external circuitry.
2, 6	FBKGND2, FBKGND1	Ground Kelvin feedback (Channels 1 & 2)
3	DCMP	Internal mode selection. This pin must be grounded for proper device operation.
4, 7	FBKOUT2, FBKOUT1	Switching feedback (Channels 1 & 2)
5	VPWR	Test pin. Must be left floating.
8	HMUTE	Logic output. A logic high indicates both amplifiers are muted, due to the mute pin state, or a “fault”.
9, 12	Y1, Y2	Non-inverted switching modulator outputs.
10, 11	Y1B, Y2B	Inverted switching modulator outputs.
13	NC	No connect
14	OCD2	Over Current Detect input.
15	REF	Internal bandgap reference voltage; approximately 1.2 VDC.
16	OCD1	Over Current Detect input.
17	VNNSENSE	Negative supply voltage sense input. This pin is used for both over and under voltage sensing for the VNN supply.
18	OVRLDB	A logic low output indicates the input signal has overloaded the amplifier.
19	VPPSENSE	Positive supply voltage sense input. This pin is used for both over and under voltage sensing for the VPP supply.
20	AGND	Ground.
21	V5	5 Volt power supply input.
22, 27	OAOUT1, OAOUT2	Input stage output pins.
23, 28	IN1, IN2	Single-ended inputs. Inputs are a “virtual” ground of an inverting opamp with approximately 2.4VDC bias.
24	MUTE	When set to logic high, both amplifiers are muted and in idle mode. When low (grounded), both amplifiers are fully operational. If left floating, the device stays in the mute mode. Ground if not used.
25, 26	BBM1, BBM0	Break-before-make timing control to prevent shoot-through in the output MOSFETs.

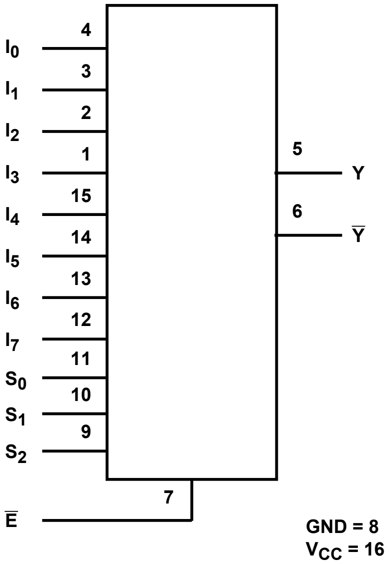
TP2150 Pin Description (IC53,63,73,83)

Pin	Function	Description
2,5	AGND	Analog ground.
6	V5	5V power supply input.
7	OCD1	Over-current threshold output (Channel 1)
9	CSS	Soft startup for VN10 controller, this pin should be tied to V5
10	OCD2	Over-current threshold output (Channel 2)
13,17	Y2, Y1	Non-inverted switching modulator inputs
14,16	Y2B, Y1B	Inverted switching modulator inputs
27,57	VBOOT2, VBOOT1	Bootstrapped voltage to supply drive to gate of high-side FET (Channel 2 & 1)
30,31	OCS2LP, OCS2LN	Over Current Sense inputs, Channel 2 low-side
33,34	OCS2HP, OCS2HN	Over Current Sense inputs, Channel 2 high-side
36,48	HO2, HO1	High side gate drive output (Channel 2 & 1)
37,47	HO2COM, HO1COM	Kelvin connection to source of high-side transistor (Channel 2 & 1)
39,45	LO2COM, LO1COM	Kelvin connection to source of low-side transistor (Channel 2 & 1)
40,44	LO2, LO1	Low side gate drive output (Channel 2 & 1)
41,43	VN10	“Floating” supply input for the FET drive circuitry. This voltage must be stable and referenced to VNN.
42	VNN	Negative supply voltage.
50,51	OCS1HN, OCS1HP	Over Current Sense inputs, Channel 1 high-side
53,54	OCS1LN , OCS1LP	Over Current Sense inputs, Channel 1 low-side
59	SW-FB	Feedback for regulating switching power supply output for VN10
60	SMPSO	Switching power supply output for VN10
1,3,4,8, 11,12,15, 18,19,20, 21,22,23, 24,25,26, 28,31,32, 35,38,46, 49,52,53, 56,58,61, 62,63,64	NC	Not connected (bonded) internally. Please refer to the Application/Test circuit for details on the how to connect these pins.

74HC151: IC34

Functional Diagram


I3 1
I2 2
I1 3
I0 4
Y 5
$\overline{Y}$ 6
7
GND 8
16 VCC
15 I3
14 I4
13 I6
12 I7
11 S0
10 S1
9 S2

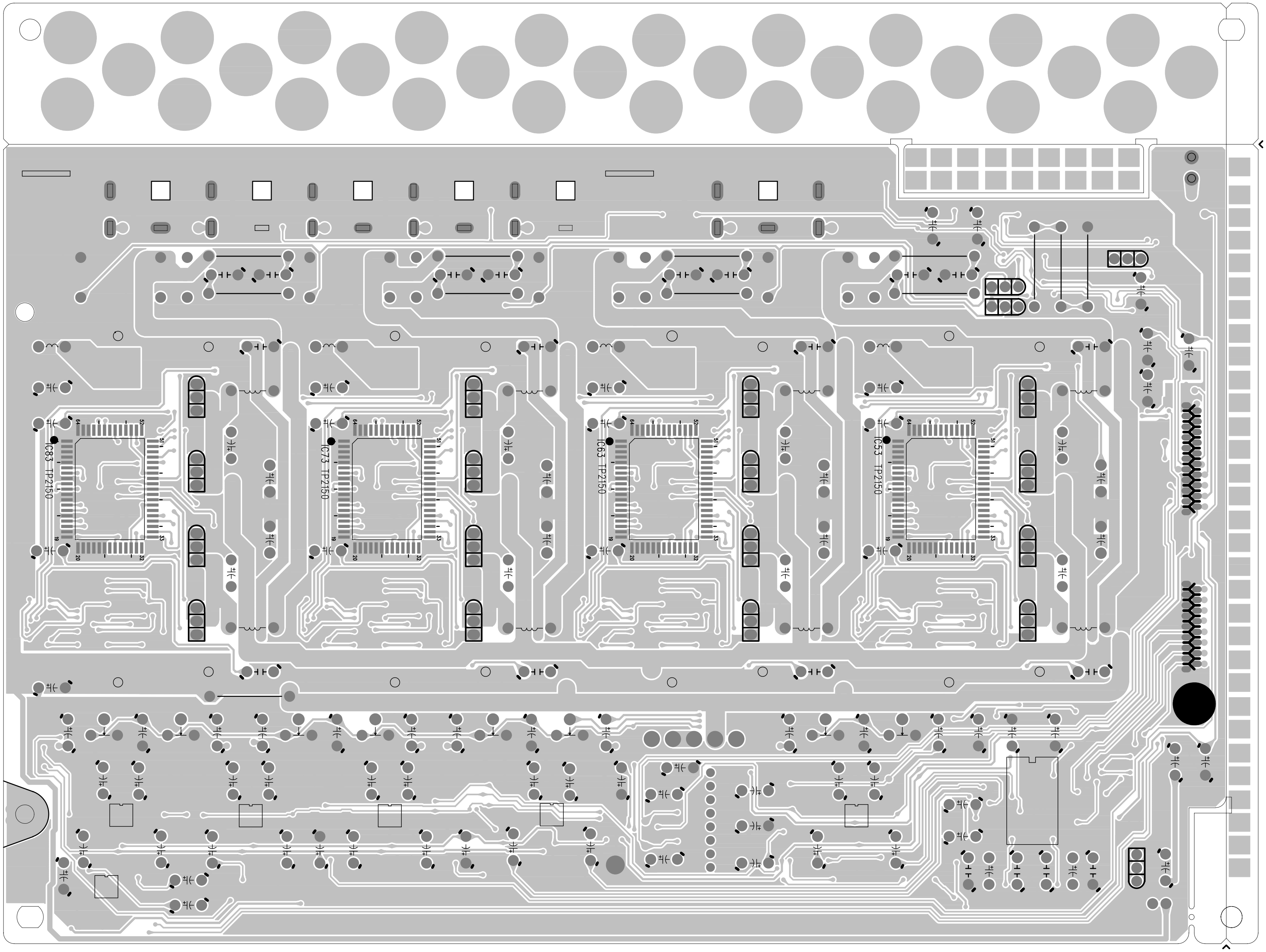

I_0 4
I_1 3
I_2 2
I_3 1
I_4 15
I_5 14
I_6 13
I_7 12
S_0 11
S_1 10
S_2 9
$\overline{E}$ 7
5 Y
6 $\overline{Y}$
GND = 8
V_{CC} = 16

TRUTH TABLE

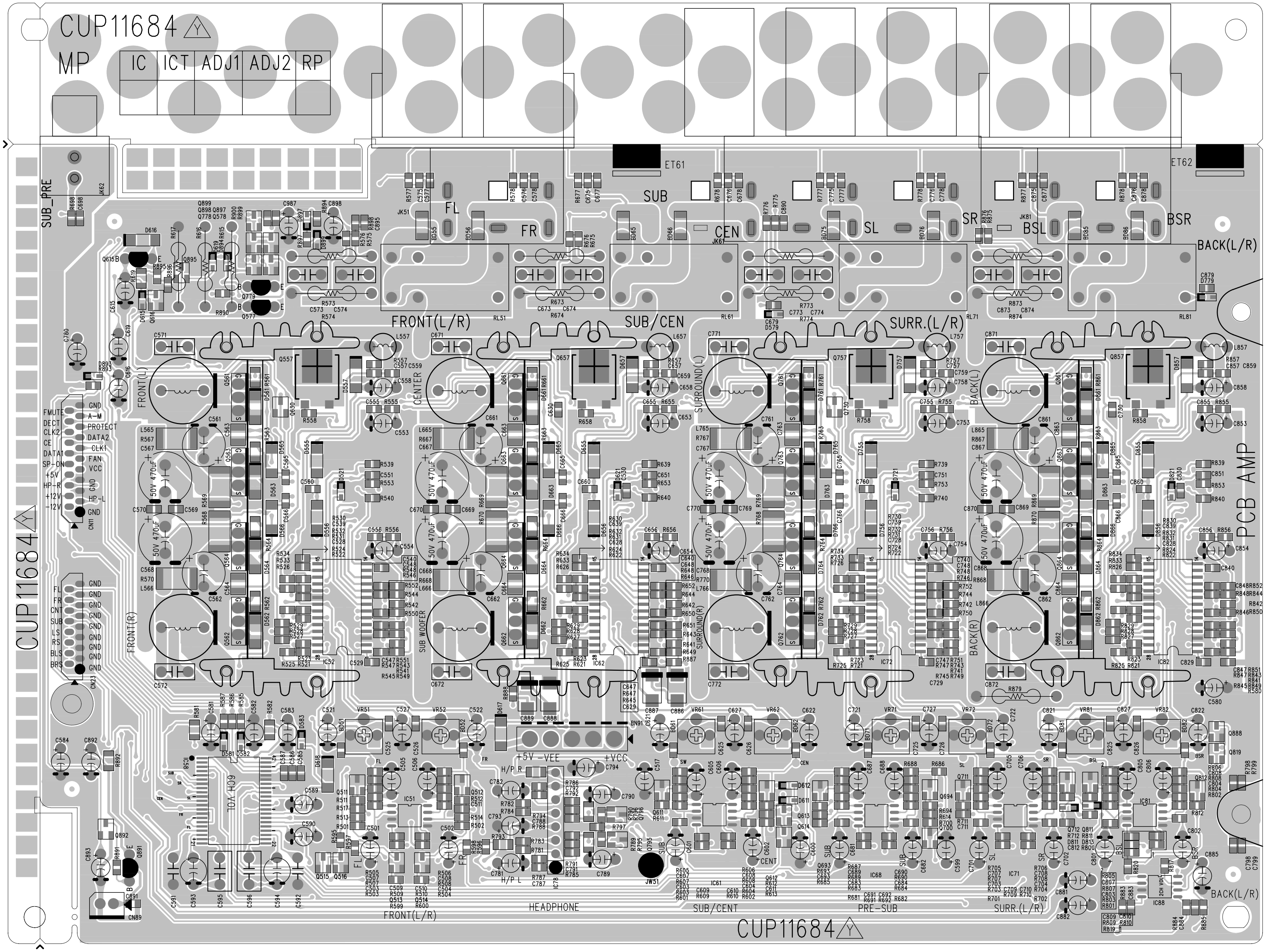
SELECT INPUTS			DATA INPUTS								ENABLE	OUTPUT	
S2	S1	S0	I0	$\overline{\text{I1}}$	I2	I3	I4	I5	I6	I7	$\overline{\text{E}}$	$\overline{\text{Y}}$	Y
X	X	X	X	X	X	X	X	X	X	X	H	H	L
L	L	L	L	X	X	X	X	X	X	X	L	H	L
L	L	L	H	X	X	X	X	X	X	X	L	L	H
L	L	H	X	L	X	X	X	X	X	X	L	H	L
L	L	H	X	H	X	X	X	X	X	X	L	L	H
L	H	L	X	X	L	X	X	X	X	X	L	H	L
L	H	L	X	X	H	X	X	X	X	X	L	L	H
L	H	H	X	X	X	L	X	X	X	X	L	H	L
L	H	H	X	X	X	H	X	X	X	X	L	L	H
H	L	L	X	X	X	X	L	X	X	X	L	H	L
H	L	L	X	X	X	X	H	X	X	X	L	L	H
H	L	H	X	X	X	X	X	L	X	X	L	H	L
H	L	H	X	X	X	X	X	H	X	X	L	L	H
H	H	L	X	X	X	X	X	X	L	X	L	H	L
H	H	L	X	X	X	X	X	X	H	X	L	L	H
H	H	H	X	X	X	X	X	X	X	L	L	H	L
H	H	H	X	X	X	X	X	X	X	H	L	L	H

NOTE: H = High Voltage Level, L = Low Voltage Level, X = Don’t Care

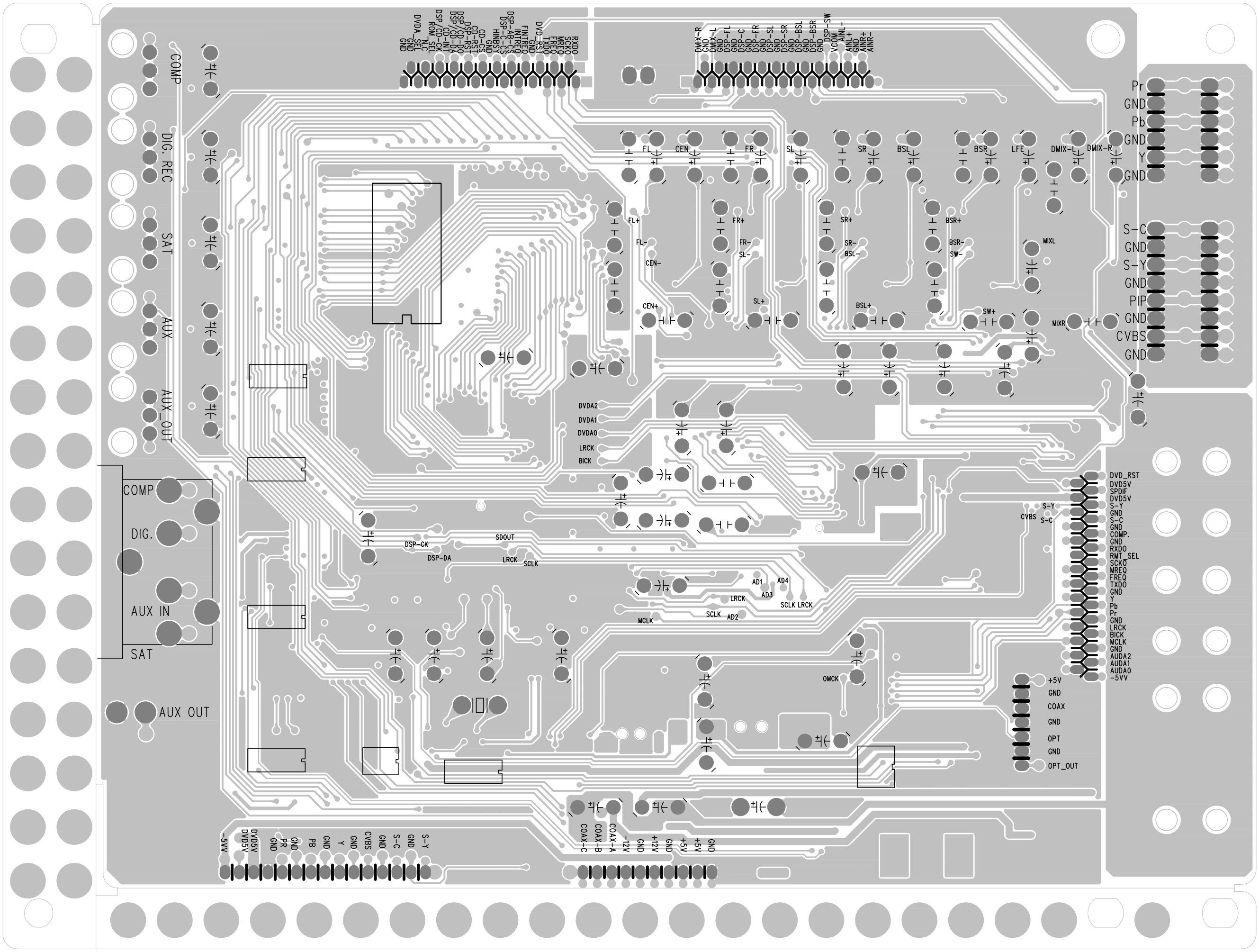
AMP BOARD(BOTTOM SIDE)


IC83 TP2150
IC73 TP2150
IC63 TP2150
IC53 TP2150

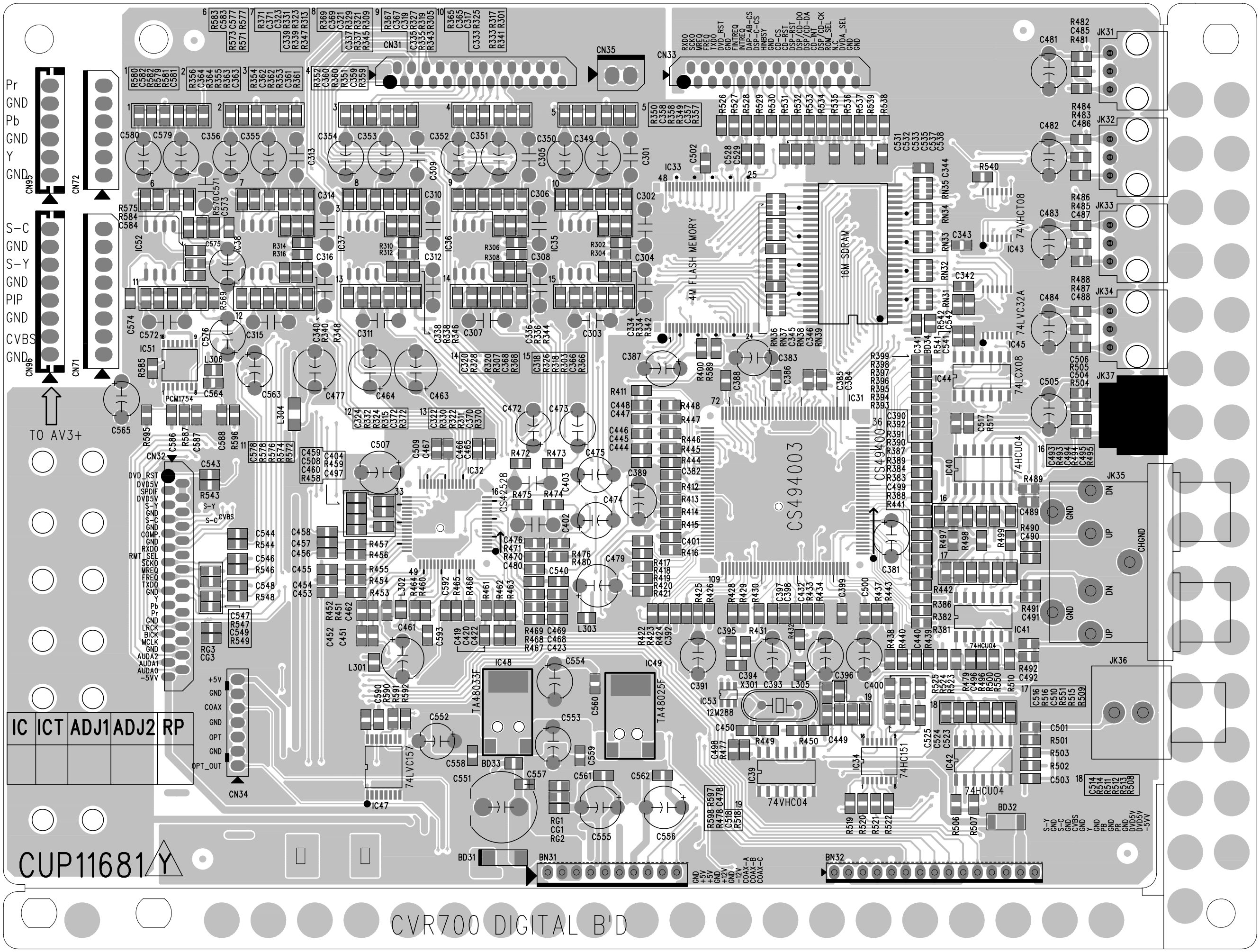
AMP BOARD(TOP SIDE)


CUP11684
MP
IC
ICT
ADJ1
ADJ2
RP
SUB_PRE
ET61
ET62
FL
FR
SUB
CEN
SL
SR
BSL
BSR
BACK(L/R)
FRONT(L/R)
SUB/CEN
SURR.(L/R)
FRONT(L)
FRONT(R)
CENTER
SUB WOOFER
SURROUND(L)
SURROUND(R)
BACK(L)
BACK(R)
50V 470uF
PCB AMP
FMUTE
DECT
CLK2
CE
DATA1
SP-ON
+5V
HP-R
+12V
-12V
GND
A-M
PROTECT
DATA2
CLK1
FAN
VCC
HP-L
CN11
CN23
LS
RS
BLS
BRS
CNT
+5V -VEE +VCC
H/P R
H/P L
HEADPHONE
6CH VOL
JW51
2CH VOL
SUB/CENT
PRE-SUB
SURR.(L/R)
CN89

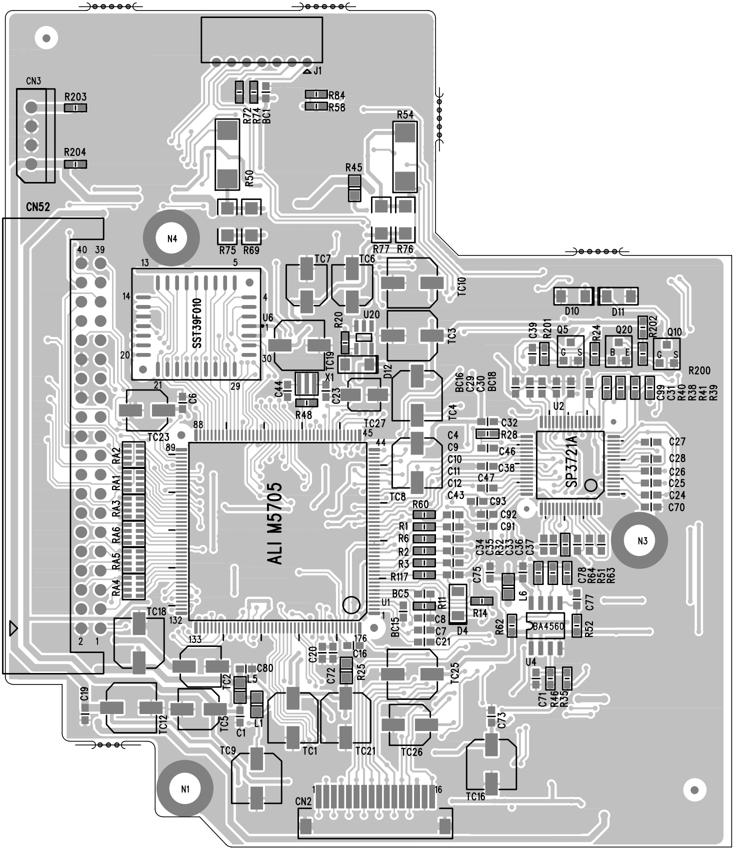
DIGITAL BOARD(BOTTOM SIDE)


GND
GND
DVDA_SEL
N.C
ROM_SEL
DSP/CD-CK
CD-INT
DSP/CD-DA
DSP/CD-DO
DSP-RST
CD-RST
CD-CS
GND
HINBSY
DSP-C-CS
DSP-AB-CS
INTREQ
FINTREQ
GND
DVD_RST
TXDO
FREQ
MREQ
SCKO
RXDO
DMIX-R
GND
DMIX-L
GND
DSP-FL
GND
DSP-C
GND
DSP-FR
GND
DSP-SL
GND
DSP-SR
GND
DSP-BSL
GND
DSP-BSR
GND
DSP-SW
VCOM
AINL-
AINL+
GND
AINR+
AINR-
COMP
DIG. REC
SAT
AUX
AUX_OUT
COMP
DIG.
AUX IN
SAT
AUX OUT
FL
CEN
FR
SL
SR
BSL
BSR
LFE
DMIX-L
DMIX-R
FL+
FL-
CEN-
FR+
FR-
SL-
SR+
SR-
BSL-
BSR+
BSR-
SW-
MIXL
CEN+
SL+
BSL+
SW+
MIXR
Pr
GND
Pb
GND
Y
GND
S-C
GND
S-Y
GND
PIP
GND
CVBS
GND
DVDA2
DVDA1
DVDA0
LRCK
BICK
DSP-CK
DSP-DA
SDOUT
LRCK
SCLK
AD1
AD4
AD3
LRCK
SCLK LRCK
SCLK
AD2
MCLK
OMCK
S-Y
CVBS
S-C
DVD_RST
DVD5V
SPDIF
DVD5V
S-Y
GND
S-C
GND
COMP.
GND
RXDO
RMT_SEL
SCKO
MREQ
FREQ
TXDO
GND
Y
Pb
Pr
GND
LRCK
BICK
MCLK
GND
AUDA2
AUDA1
AUDA0
-5VV
+5V
GND
COAX
GND
OPT
GND
OPT_OUT
-5VV
DVD5V
DVD5V
GND
PR
GND
PB
GND
Y
GND
CVBS
GND
S-C
GND
S-Y
COAX-C
COAX-B
COAX-A
-12V
GND
+12V
GND
+5V
+5V
GND

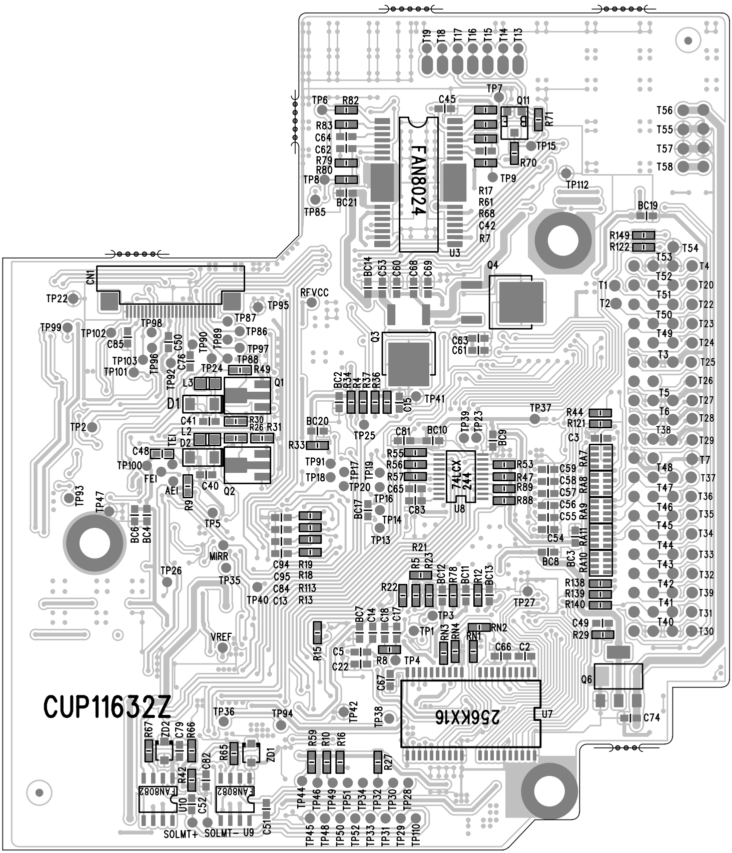
DIGITAL BOARD(TOP SIDE)


CN95
CN72
Pr
GND
Pb
GND
Y
GND
S-C
GND
S-Y
GND
PIP
GND
CVBS
GND
CN96
CN71
TO AV3+
CN31
CN35
CN33
IC33
4M FLASH MEMORY
16M-SDRAM
IC31
CS494003
CS42528
IC32
IC51
PCM1754
IC52
CN32
CN34
IC48
TA48033F
IC49
TA48025F
IC47
74LVC157
IC53
12M288
X301
IC39
74VHC04
IC34
74HC151
IC42
74HCU04
IC40
74HCU04
IC41
IC43
74VHCT08
IC45
74LVC32A
IC44
74LCX08
JK31
JK32
JK33
JK34
JK35
JK36
JK37
BD31
BD32
BD33
BD34
BN31
BN32
IC
ICT
ADJ1
ADJ2
RP
CUP11681
Y
CVR700 DIGITAL B'D

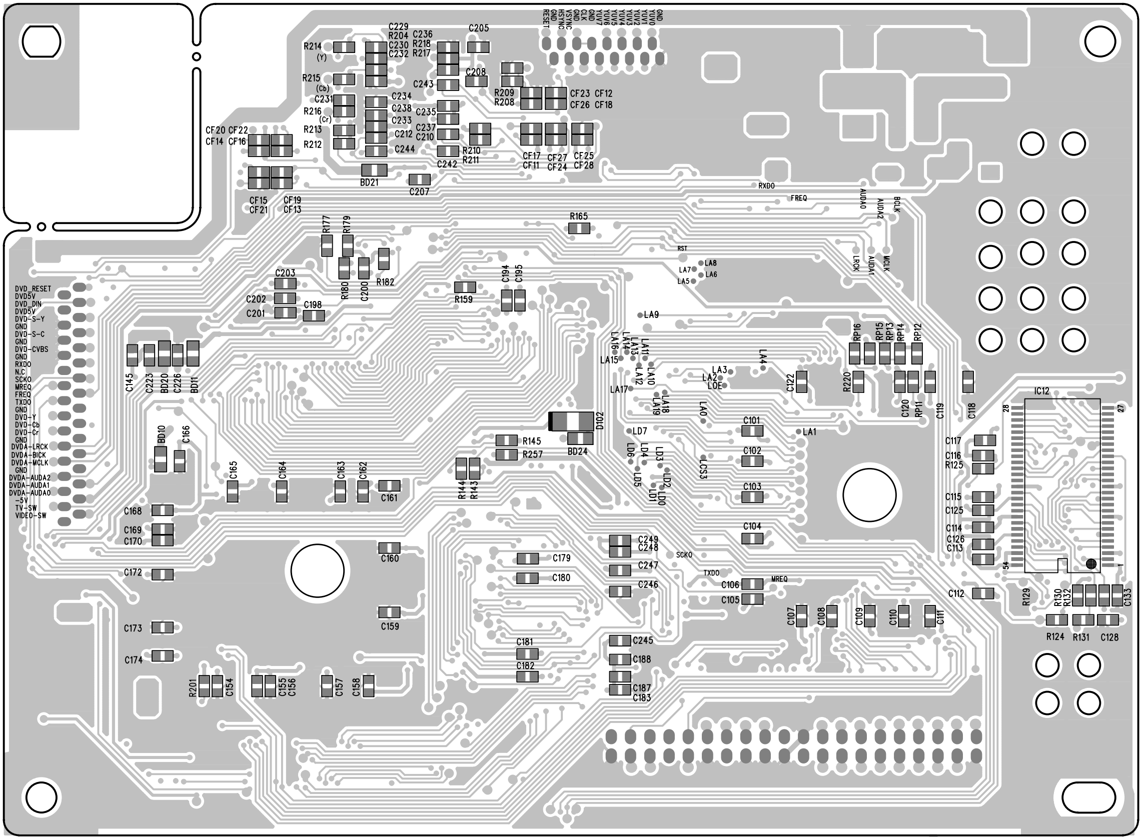
DVD F_E BOARD(TOP SIDE)


J1
CN3
R203
R204
R72
R74
BC1
R84
R58
R54
R50
R45
CN52
N4
R75
R69
R77
R76
40
39
13
5
TC7
TC6
TC10
14
4
SST39F010
U6
R20
U20
TC3
20
30
TC19
X1
D12
21
29
C44
R48
C23
TC4
C6
TC23
88
TC27
45
89
44
ALI M5705
TC8
RA2
RA1
RA3
RA6
RA5
RA4
TC18
132
U1
1
133
176
2
1
C80
L5
TC2
C20
C16
C72
R25
TC25
C19
TC12
TC5
C1
L1
TC9
TC1
TC21
TC26
N1
CN2
1
16
TC16
C73
D10
D11
C39
R201
Q5
G
S
R24
Q20
B
E
R202
Q10
G
S
R200
BC16
C29
C30
BC18
C99
C31
R40
R38
R41
R39
U2
C32
R28
C46
C38
C47
C4
C9
C10
C11
C12
C43
SP3721A
C27
C28
C26
C25
C24
C70
R60
R1
R6
R2
R3
R117
C93
C92
C91
C34
C35
R32
C33
C36
C37
N3
C75
L6
C78
R64
R51
R63
BC5
R11
R14
C77
BC15
C8
C7
C21
D4
R62
BA4560
R52
U4
C71
R46
R35

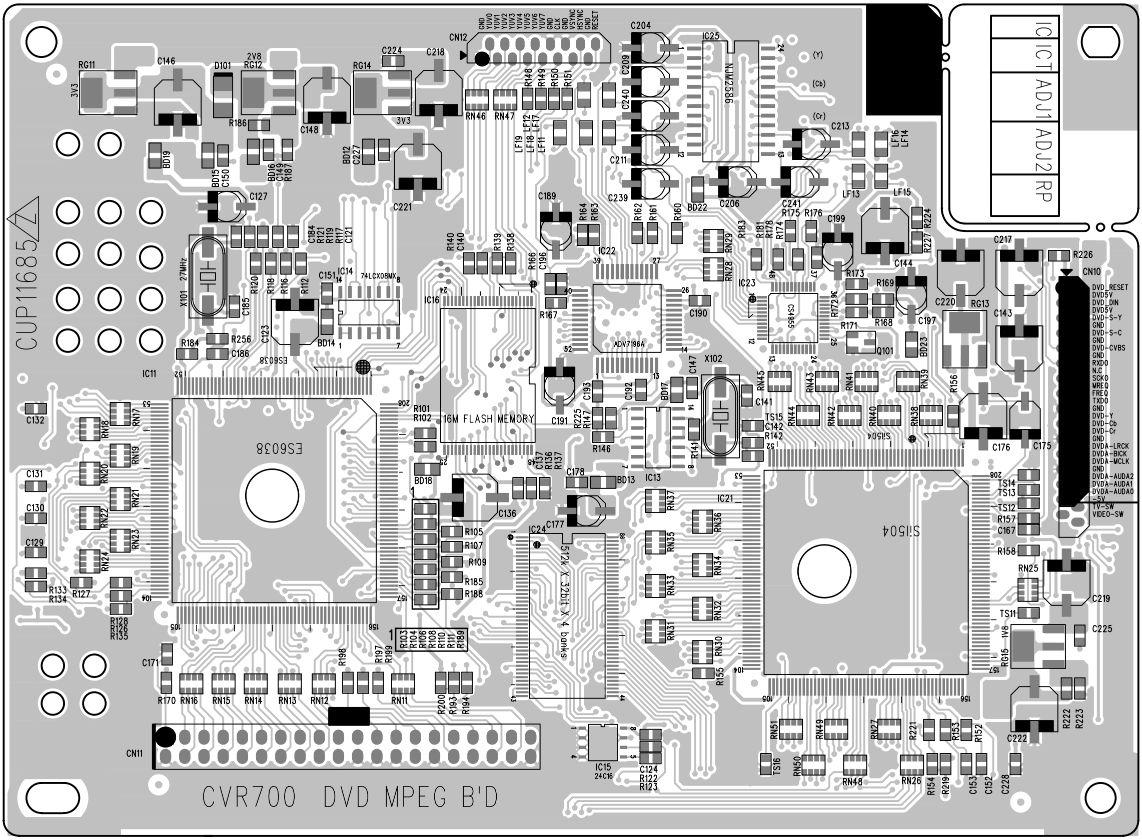
DVD F_E BOARD(BOTTOM SIDE)


T19 T18 T17 T16 T15 T14 T13
TP7
C45
Q11
R71
TP6
R82
R83
C64
C62
R79
R80
TP8
TP85
BC21
FAN8024
U3
TP15
R70
TP9
TP112
R17
R61
R68
C42
R7
T56
T55
T57
T58
BC19
R149
R122
T54
T53
T4
T52
T20
T51
T22
T50
T23
T49
T24
T3
T25
T26
T5
T27
T6
T28
T38
T29
T7
T48
T37
T47
T36
T46
T35
T45
T34
T44
T33
T43
T32
T42
T39
T41
T31
T40
T30
T1
T2
Q4
BC14
C53
C60
C68
C69
CN1
TP22
TP99
TP102
C85
TP98
TP95
TP87
TP86
TP97
TP88
R49
TP103
TP101
TP96
TP92
C76
C50
TP90
TP89
TP24
RFVCC
L3
Q1
D1
C41
R30
R26
R31
L2
D2
TE1
C48
TP100
FEI
AEI
C40
Q2
R9
TP2
TP93
TP47
BC6
BC4
TP5
MIRR
TP26
TP35
TP40
C13
C94
C95
C84
R19
R18
R113
R13
Q3
C63
C61
BC2
R34
R4
R37
R36
C15
TP41
BC20
R33
TP25
TP91
TP18
TP17
TP19
TP20
BC17
TP16
TP14
TP13
C81
BC10
TP39
TP23
BC9
R55
R56
R57
C65
C83
74LCX 244
U8
R53
R47
R89
R88
C59
C58
C57
C56
C55
C54
BC8
BC3
RA7
RA8
RA9
RA11
RA10
TP37
R44
R121
C3
R21
R5
R23
BC12
R78
BC11
R12
BC13
R22
TP27
R138
R139
R140
C49
R29
TP3
TP1
RN3
RN4
RN2
RN1
BC7
C14
C18
C17
R15
C5
C22
R8
TP4
C66
C2
Q6
C67
VREF
CUP11632Z
TP36
TP94
TP42
TP38
256KX16
U7
C74
R67
ZD2
C79
R66
R65
ZD1
C82
R42
FAN8082
U10
C52
FAN8082
U9
C51
R59
R10
R16
R27
TP44
TP46
TP49
TP51
TP34
TP32
TP30
TP28
TP45
TP48
TP50
TP52
TP33
TP31
TP29
TP110
SOLMT+
SOLMT-

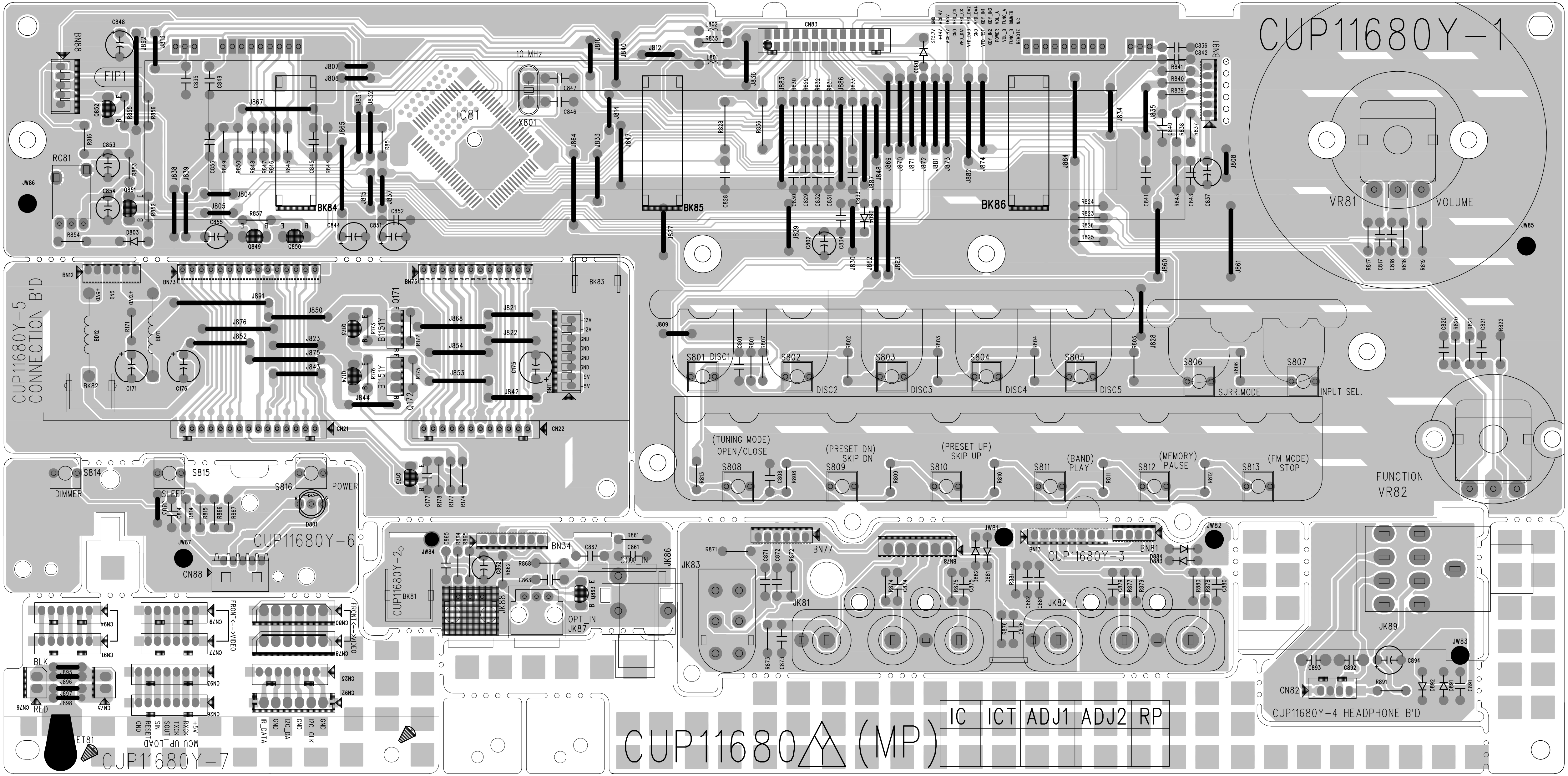
DVD MPEG BOARD(BOTTOM SIDE)


RESET
HSYNC
VSYNC
GND
CLK
GND
YUV7
YUV6
YUV5
YUV4
YUV3
YUV2
YUV1
YUV0
GND
C229
R204
C230
C232
C236
R218
R217
C205
R214
(Y)
R215
(Cb)
C231
R216
(Cr)
R213
R212
C243
C208
C234
C238
C233
C235
C237
C210
C212
C244
C242
R210
R211
R209
R208
CF23
CF12
CF26
CF18
CF17
CF11
CF27
CF24
CF25
CF28
CF20
CF22
CF14
CF16
CF15
CF21
CF19
CF13
BD21
C207
RXDO
FREQ
AUDA0
AUDA2
BCLK
AUDA1
LRCK
MCLK
R165
R177
R179
R180
C200
R182
C203
C202
C201
C198
R159
C194
C195
RST
LA8
LA7
LA6
LA5
LA9
DVD_RESET
DVD5V
DVD_DIN
DVD5V
DVD-S-Y
GND
DVD-S-C
GND
DVD-CVBS
GND
RXDO
N.C
SCKO
MREQ
FREQ
TXDO
GND
DVD-Y
DVD-Cb
DVD-Cr
GND
DVDA-LRCK
DVDA-BICK
DVDA-MCLK
GND
DVDA-AUDA2
DVDA-AUDA1
DVDA-AUDA0
-5V
TV-SW
VIDEO-SW
C145
C223
BD20
C226
BD11
LA16
LA13
LA14
LA11
LA12
LA10
LA15
LA17
LA18
LA19
LA3
LA2
LOE
LA4
LA0
LA1
C122
RP16
RP15
RP13
RP14
RP12
R220
C120
RP11
C119
C118
IC12
28
27
54
1
D102
BD24
R145
R257
LD7
LD6
LD4
LD3
LD5
LD2
LD1
LD0
LCS3
C101
C102
C103
C104
C117
C116
R125
C115
C125
C114
C126
C113
BD10
C166
C165
C164
C163
C162
C161
R144
R143
C168
C169
C170
C160
C179
C180
C249
C248
C247
C246
SCKO
TXDO
C106
C105
MREQ
C112
R129
R130
R132
C133
C172
C107
C108
C109
C110
C111
R124
R131
C128
C173
C159
C181
C182
C245
C188
C187
C183
C174
R201
C154
C155
C156
C157
C158

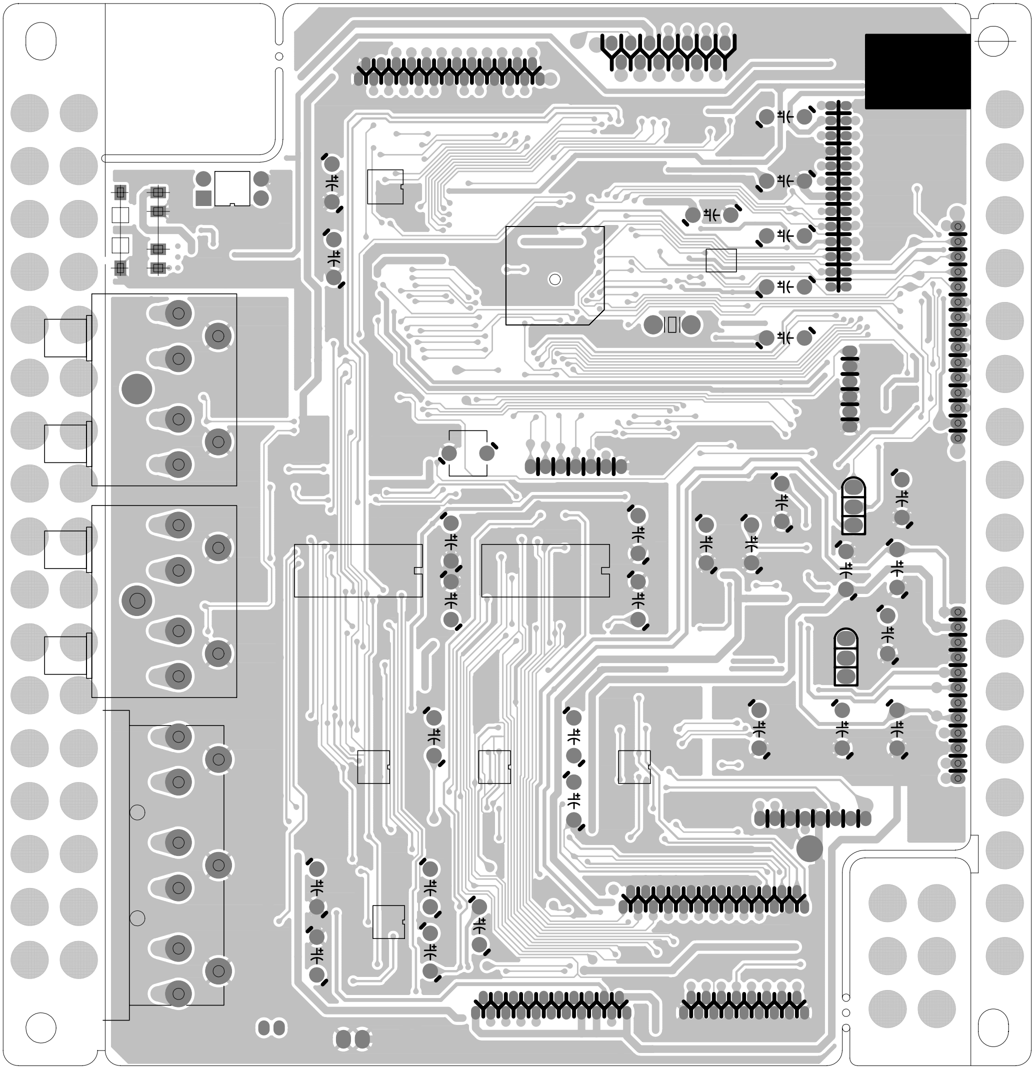
DVD MPEG BOARD(TOP SIDE)


CVR700 DVD MPEG B'D
CUP11685
CN12
GND
YUV0
YUV1
YUV2
YUV3
YUV4
YUV5
YUV6
YUV7
GND
CLK
GND
VSYNC
HSYNC
GND
RESET
IC25
NJM2586
(Y)
(Cb)
(Cr)
IC
ICT
ADJ1
ADJ2
RP
CN10
DVD_RESET
DVD5V
DVD_DIN
DVD5V
DVD-S-Y
GND
DVD-S-C
GND
DVD-CVBS
GND
RXDO
N.C
SCKO
MREQ
FREQ
TXDO
GND
DVD-Y
DVD-Cb
DVD-Cr
GND
DVDA-LRCK
DVDA-BICK
DVDA-MCLK
GND
DVDA-AUDA2
DVDA-AUDA1
DVDA-AUDA0
-5V
TV-SW
VIDEO-SW
RG11
3V3
C146
D101
2V8
RG12
RG14
C224
C218
3V3
R186
C148
BD19
BD15
C150
BD16
C149
R187
BD12
C227
C221
C127
X101
27MHz
C184
R121
R119
R117
C121
R120
R118
R116
R112
C185
C151
IC14
74LCX08MX
BD14
C123
R184
R256
C186
ES6038
IC11
C132
RN18
RN17
RN19
RN20
RN21
RN22
RN23
RN24
C131
C130
C129
R133
R134
R127
R128
R126
R135
C171
R170
RN16
RN15
RN14
RN13
RN12
RN11
R198
R197
R199
R200
R193
R194
CN11
IC16
16M FLASH MEMORY
R101
R102
BD18
R105
R107
R109
R185
R188
R103
R104
R106
R108
R110
R111
R189
C136
RN46
RN47
R148
R149
R150
R151
LF19
LF18
LF17
LF12
LF11
R140
C140
R139
R138
R166
C196
C189
R164
R163
IC22
ADV7196A
R167
C191
C193
C192
BD17
R225
R147
R146
C137
R136
R137
C178
BD13
IC13
C177
IC24
512k X 32bit X 4 banks
IC15
24C16
C124
R122
R123
C204
C209
C240
C211
C239
R162
R161
R160
BD22
C206
C241
R175
R176
C213
LF16
LF14
LF13
LF15
R183
R181
R178
R174
RN29
RN28
IC23
CS4955
R172
R173
R169
R171
R168
Q101
C199
C144
R224
R227
C217
R226
C220
RG13
C197
C143
BD23
C190
C147
X102
RN45
C141
TS15
C142
R142
R141
RN44
RN43
RN42
RN41
RN40
RN39
RN38
R156
C176
C175
Si1504
IC21
RN37
RN36
RN35
RN34
RN33
RN32
RN31
RN30
R155
TS14
TS13
TS12
R157
C167
R158
RN25
C219
TS11
RG15
C225
C222
R222
R223
RN51
RN49
RN27
R221
R153
R152
TS16
RN50
RN48
RN26
R154
R219
C153
C152
C228

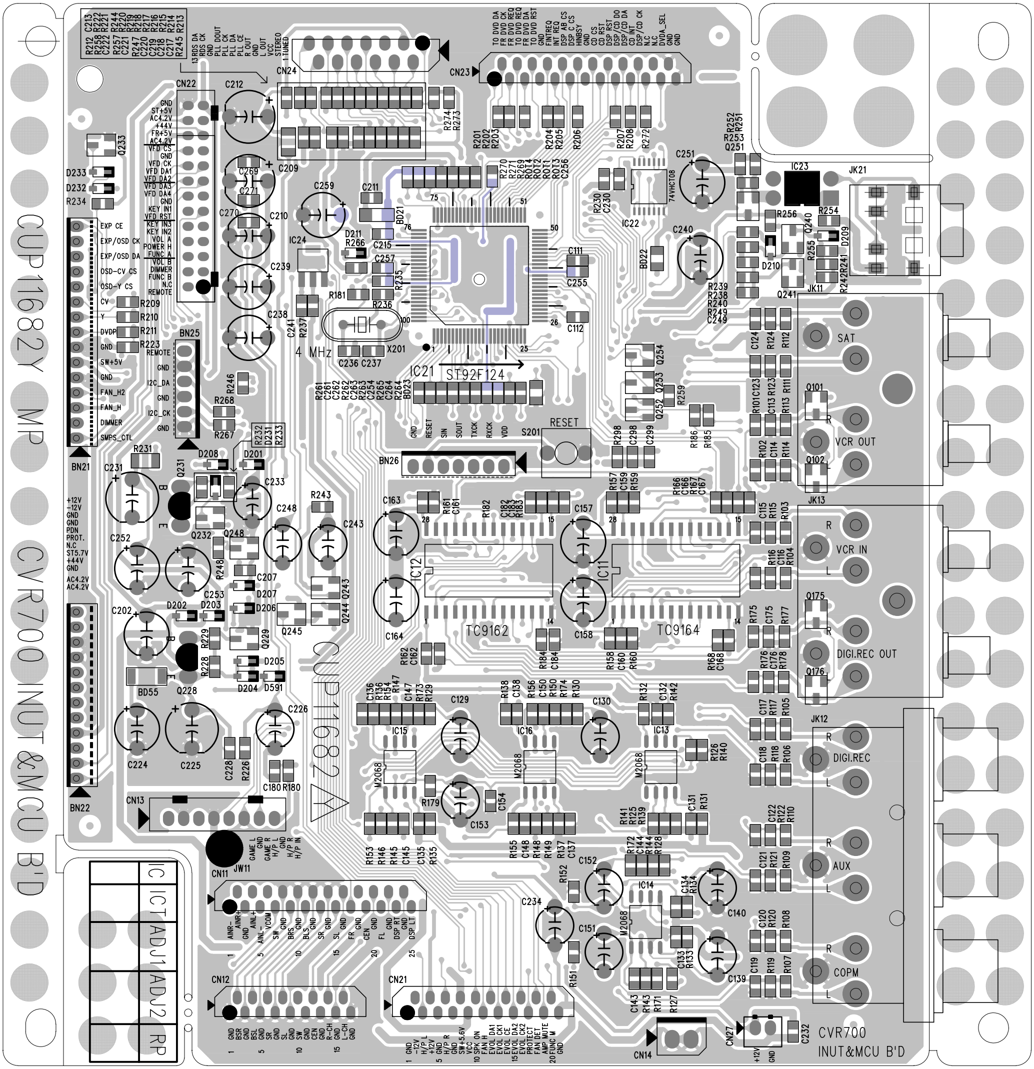
FRONT BOARD


CUP11680Y-1
CUP11680Y-5 CONNECTION B'D
CUP11680Y-6
CUP11680Y-2
CUP11680Y-3
CUP11680Y-4 HEADPHONE B'D
CUP11680Y-7
CUP11680 (MP)
IC
ICT
ADJ1
ADJ2
RP
IC81
X801
10 MHz
CN83
BK84
BK85
BK86
BN88
FIP1
RC81
VR81
VOLUME
VR82
FUNCTION
S801 DISC1
S802 DISC2
S803 DISC3
S804 DISC4
S805 DISC5
S806 SURR.MODE
S807 INPUT SEL.
S808 (TUNING MODE) OPEN/CLOSE
S809 (PRESET DN) SKIP DN
S810 (PRESET UP) SKIP UP
S811 (BAND) PLAY
S812 (MEMORY) PAUSE
S813 (FM MODE) STOP
S814 DIMMER
S815 SLEEP
S816 POWER
D801
CN88
BN34
COX_IN
JK86
JK83
JK88
OPT_IN
JK87
BN77
JK81
JK82
BN81
JK89
CN82
FRONT<->VIDEO
MCU UP_LOAD
GND
RESET
SIN
SOUT
TXCK
RXCK
+5V
IR_DATA
I2C_DA
I2C_CLK
BLK
RED
ET81
Q171
Q172
B1151Y
BK82
BK83
CN21
CN22

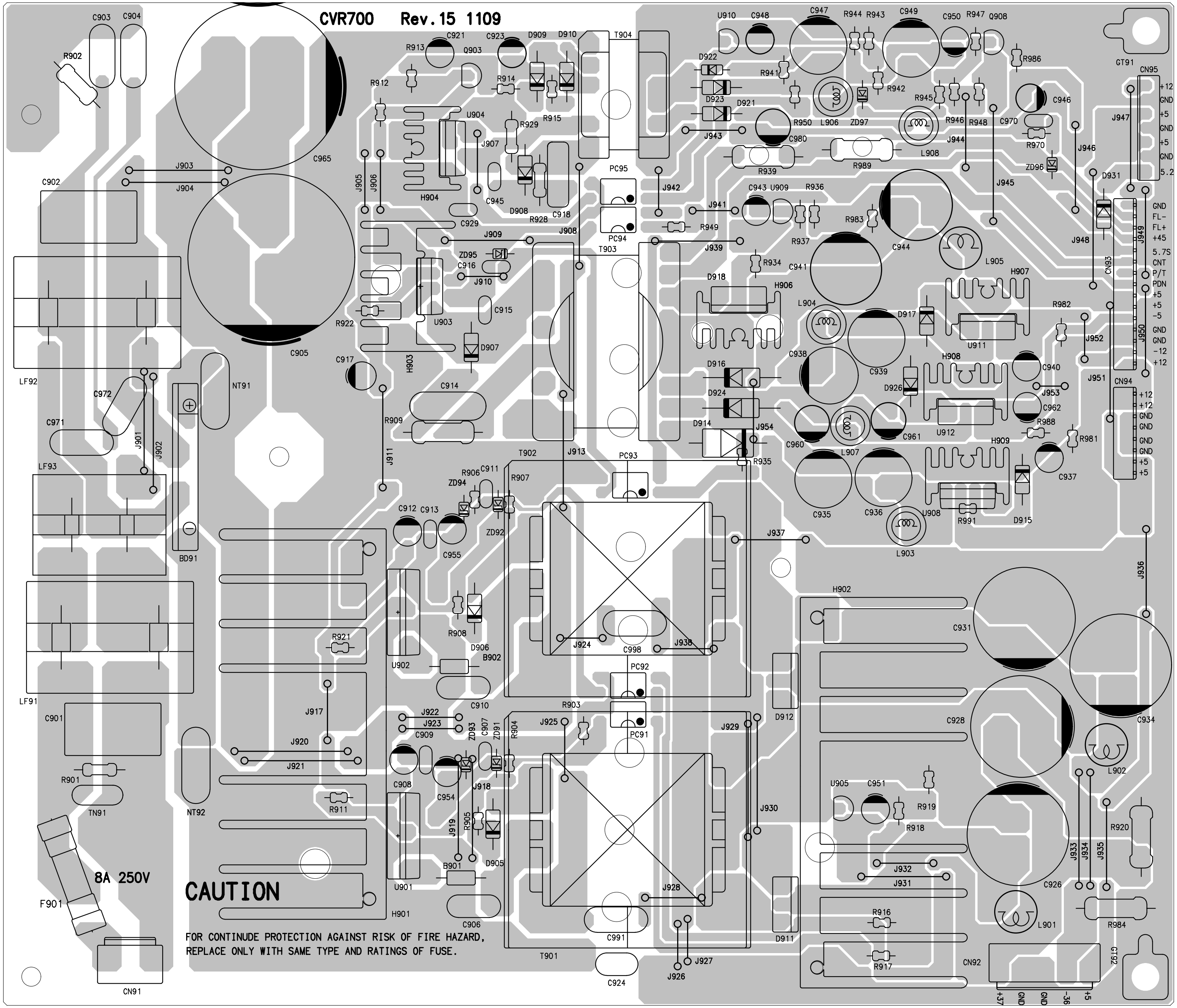
MAIN BOARD(BOTTOM SIDE)



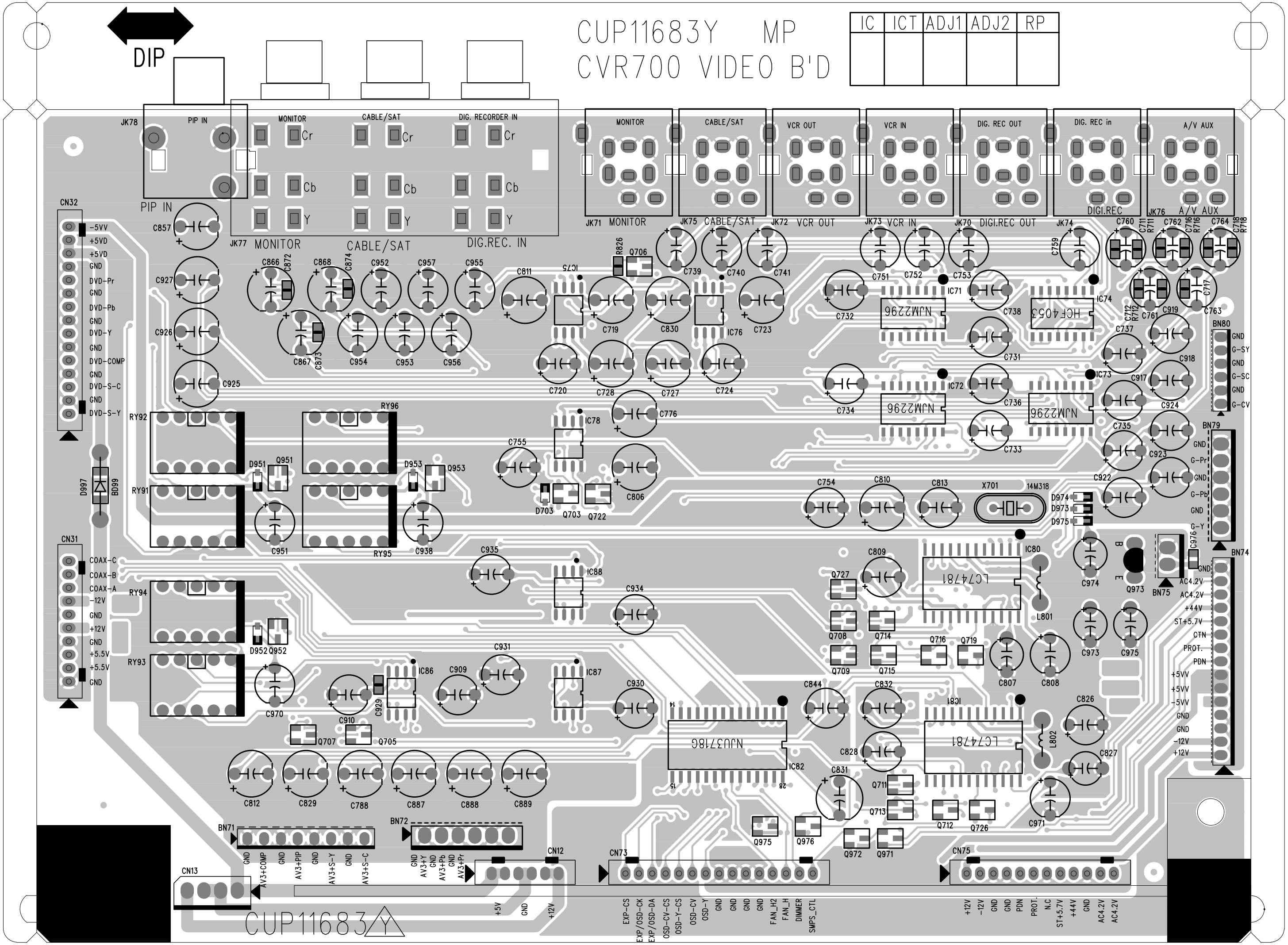
MAIN BOARD(TOP SIDE)


CUP11682Y MP CVR700 INUT&MCU B'D
CUP11682A
CVR700
INUT&MCU B'D
CN22
CN23
CN24
CN11
CN12
CN13
CN14
CN21
CN27
BN21
BN22
BN25
BN26
IC21
ST92F124
IC22
74VHCT08
IC23
IC24
IC11
IC12
TC9162
TC9164
IC13
IC14
IC15
IC16
M2068
4 MHz
X201
RESET
S201
JK11
JK12
JK13
JK21
SAT
VCR OUT
VCR IN
DIGI.REC OUT
DIGI.REC
AUX
COPM
R
L
JW11
EXP CE
EXP/OSD CK
EXP/OSD DA
OSD-CV CS
OSD-Y CS
CV
Y
DVDP
GND
SW+5V
FAN_H2
FAN_H
DIMMER
SMPS_CTL
+12V
-12V
PDN
PROT.
N.C
ST5.7V
+44V
AC4.2V
GAME L
GAME R
H/P L
H/P R
H/P IN
GND
RESET
SIN
SOUT
TXCK
RXCK
VDD
I2C_DA
I2C_CK
REMOTE
IC ICT ADJ1 ADJ2 RP

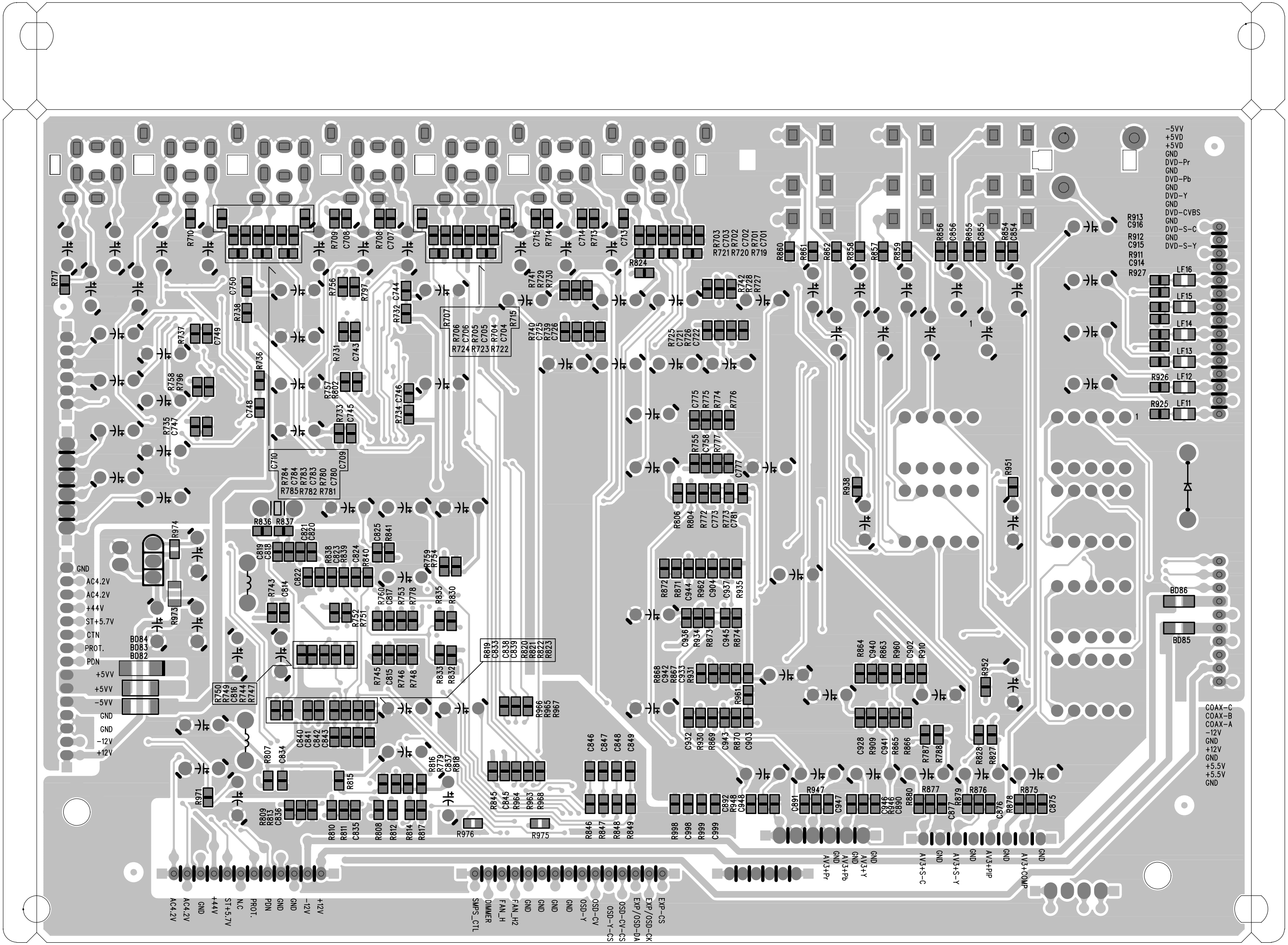
SMPS BOARD


CVR700 Rev.15 1109
C903
C904
R902
C965
C902
J903
J904
LF92
C972
C971
J901
J902
LF93
NT91
BD91
C905
LF91
C901
R901
TN91
NT92
F901
8A 250V
CN91
CAUTION
FOR CONTINUDE PROTECTION AGAINST RISK OF FIRE HAZARD,
REPLACE ONLY WITH SAME TYPE AND RATINGS OF FUSE.
R913
C921
Q903
C923
D909
D910
T904
R912
R914
U904
R929
R915
J907
J905
J906
H904
C945
D908
R928
C918
C929
J909
J908
ZD95
C916
J910
C915
R922
U903
D907
C917
H903
C914
R909
J911
PC95
PC94
T903
J942
J941
R949
J939
T902
J913
PC93
R906
C911
R907
ZD94
C912
C913
C955
ZD92
R921
R908
D906
B902
U902
C910
J917
J922
J923
C909
J920
J921
ZD93
C907
ZD91
R904
C908
C954
J918
R911
J919
R905
D905
B901
U901
H901
C906
J924
C998
J938
PC92
R903
J925
PC91
J929
J930
J928
C991
T901
C924
J926
J927
U910
C948
C947
R944
R943
C949
C950
R947
Q908
D922
R941
R986
D923
D921
R942
R945
R946
R948
C970
J943
C980
R950
L906
ZD97
L908
J944
R970
R939
R989
ZD96
C943
U909
R936
R983
C946
J947
J946
J945
GT91
CN95
+12
GND
+5
GND
+5
GND
5.2
D931
R937
C944
R934
C941
D918
H906
L905
H907
J948
CN93
J949
GND
FL-
FL+
+45
5.7S
CNT
P/T
PDN
+5
+5
-5
GND
GND
-12
+12
L904
D917
U911
R982
J952
J950
C938
C939
H908
C940
D916
D924
D926
J953
J951
CN94
+12
+12
GND
GND
GND
GND
+5
+5
D914
J954
C962
R988
C960
L907
C961
U912
H909
R981
R935
C937
C935
C936
U908
R991
D915
J937
L903
J936
H902
C931
D912
C928
C934
L902
U905
C951
R919
R918
R920
J933
J934
J935
J932
J931
C926
D911
R916
L901
R984
R917
CN92
GT92
+37
GND
GND
-36
+5

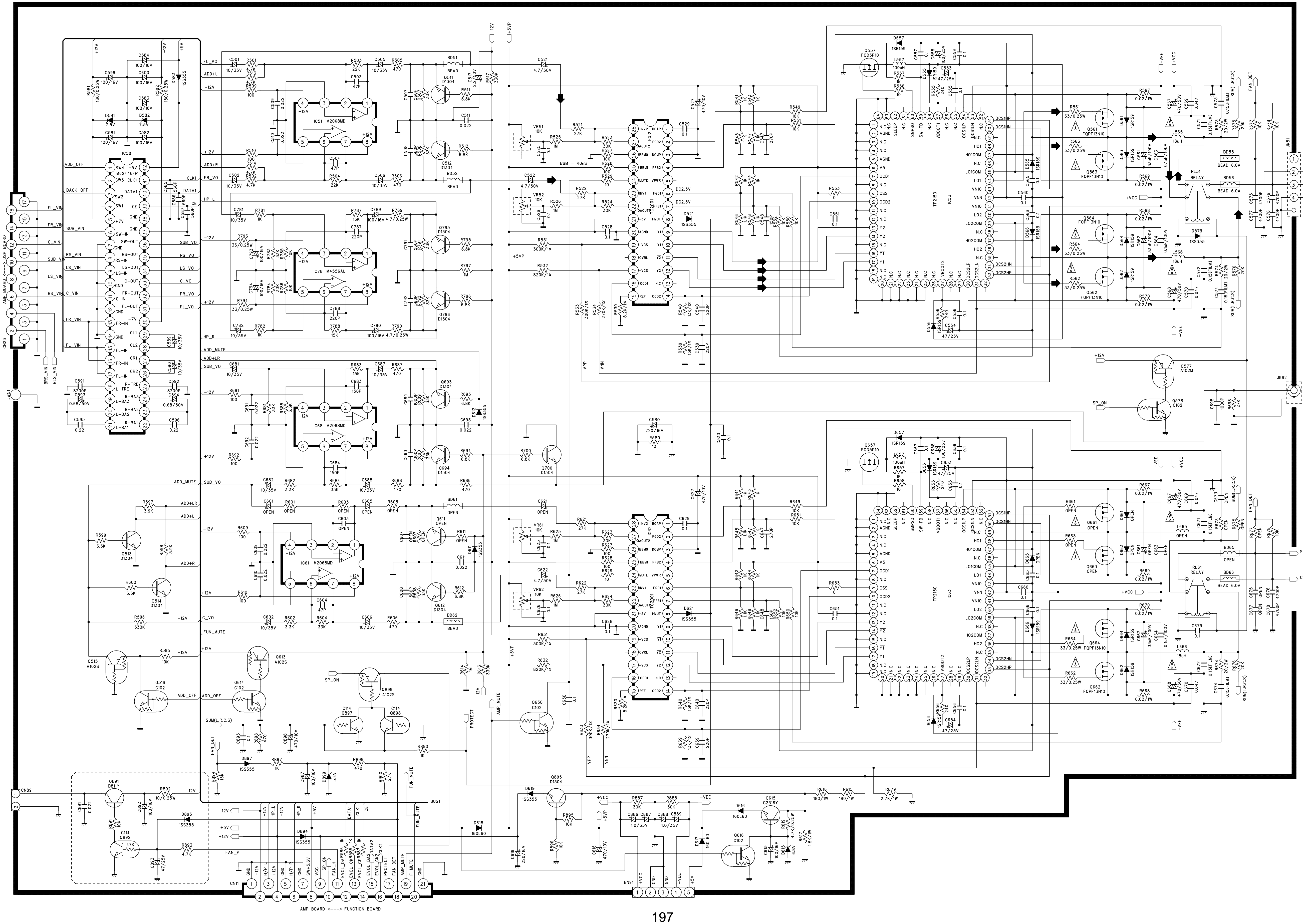
VIDEO BOARD (TOP SIDE)


DIP
CUP11683Y MP
CVR700 VIDEO B'D
IC
ICT
ADJ1
ADJ2
RP
JK78
PIP IN
MONITOR
CABLE/SAT
DIG. RECORDER IN
Cr
Cb
Y
JK77 MONITOR
CABLE/SAT
DIG.REC. IN
JK71 MONITOR
JK75 CABLE/SAT
JK72 VCR OUT
JK73 VCR IN
JK70 DIGI.REC OUT
JK74
DIGI.REC
JK76 A/V AUX
VCR OUT
VCR IN
DIG. REC OUT
DIG. REC in
A/V AUX
CN32
-5VV
+5VD
+5VD
GND
DVD-Pr
GND
DVD-Pb
GND
DVD-Y
GND
DVD-COMP
GND
DVD-S-C
GND
DVD-S-Y
CN31
COAX-C
COAX-B
COAX-A
-12V
GND
+12V
GND
+5.5V
+5.5V
GND
RY92
RY91
RY94
RY93
RY96
RY95
D997
BD99
D951
Q951
D953
Q953
D952
Q952
D703
Q703
Q722
Q706
R826
IC75
IC76
IC78
IC88
IC86
IC87
IC71
IC72
IC73
IC74
NJM2296
HCF4053
IC80
LC74781
IC81
IC82
NJU3718G
X701
14M318
D974
D973
D975
L801
L802
Q727
Q708
Q714
Q709
Q715
Q716
Q719
Q711
Q713
Q712
Q726
Q975
Q976
Q972
Q971
Q973
Q707
Q705
BN80
GND
G-SY
GND
G-SC
GND
G-CV
BN79
GND
G-Pr
GND
G-Pb
GND
G-Y
BN74
BN75
AC4.2V
AC4.2V
+44V
ST+5.7V
CTN
PROT.
PDN
+5VV
+5VV
-5VV
GND
GND
-12V
+12V
BN71
GND
AV3+COMP
GND
AV3+PIP
GND
AV3+S-Y
GND
AV3+S-C
BN72
GND
AV3+Y
GND
AV3+Pb
GND
AV3+Pr
CN12
+5V
GND
+12V
CN13
CN73
EXP-CS
EXP/OSD-CK
EXP/OSD-DA
OSD-CV-CS
OSD-Y-CS
OSD-CV
OSD-Y
GND
GND
GND
GND
FAN_H2
FAN_H
DIMMER
SMPS_CTL
CN75
+12V
-12V
GND
GND
PDN
PROT.
N.C
ST+5.7V
+44V
GND
AC4.2V
AC4.2V
CUP11683Y
C857
C927
C926
C925
C866
C872
C868
C874
C952
C957
C955
C867
C873
C954
C953
C956
C811
C719
C830
C723
C739
C740
C741
C720
C728
C727
C724
C776
C755
C806
C951
C938
C935
C934
C931
C909
C910
C929
C930
C970
C812
C829
C788
C887
C888
C889
C751
C752
C753
C732
C738
C731
C734
C736
C733
C737
C735
C759
C760
C711
R711
C762
C716
R716
C764
C718
R718
C712
R712
C761
C717
C763
C919
C918
C917
C924
C923
C922
C754
C810
C813
C809
C974
C976
C973
C975
C807
C808
C844
C832
C828
C831
C826
C827
C971
B
E

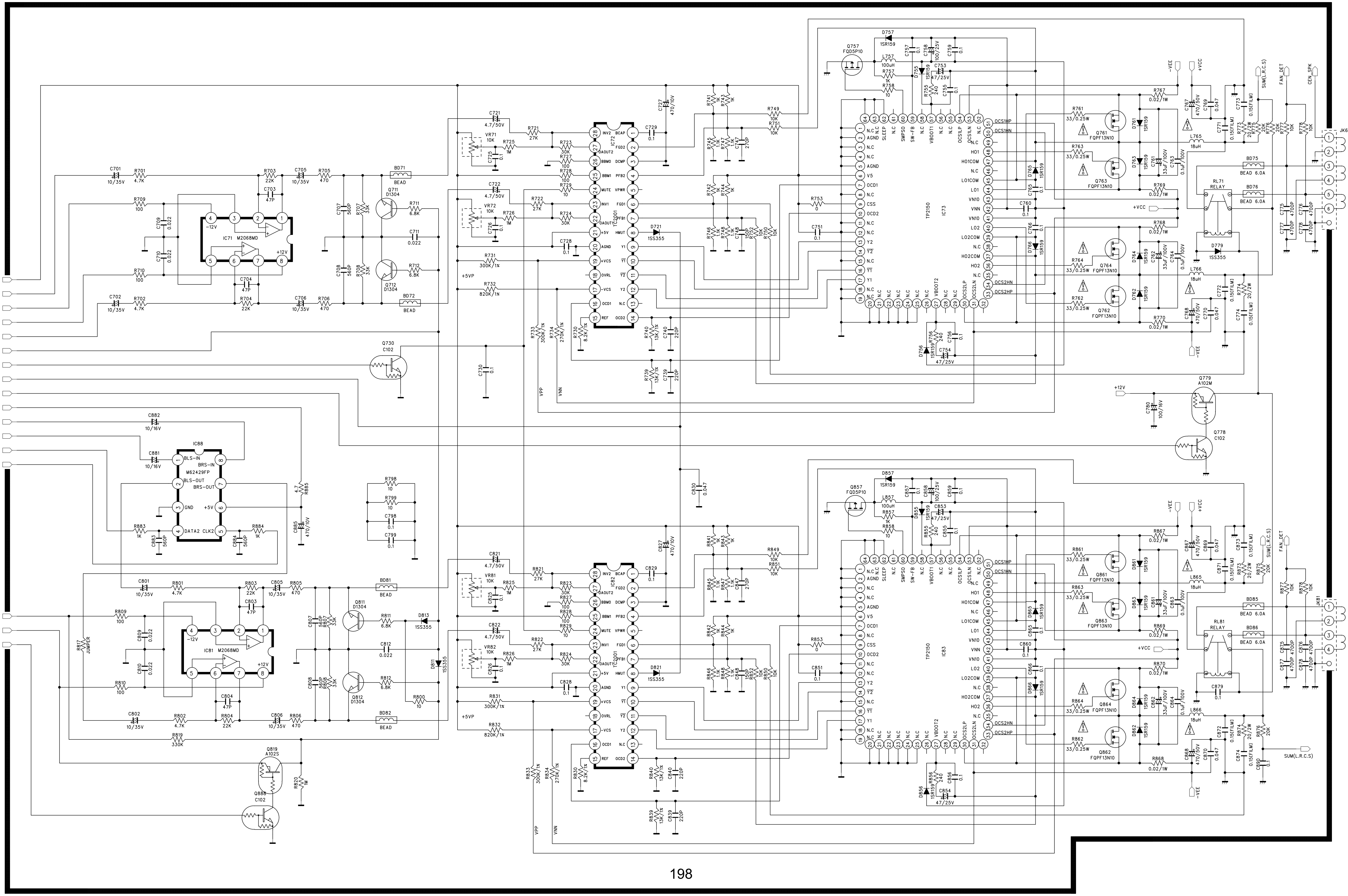
VIDEO BOARD (BOTTOM SIDE)


-5VV
+5VD
+5VD
GND
DVD-Pr
GND
DVD-Pb
GND
DVD-Y
GND
DVD-CVBS
GND
DVD-S-C
GND
DVD-S-Y
LF16
LF15
LF14
LF13
LF12
LF11
BD86
BD85
COAX-C
COAX-B
COAX-A
-12V
GND
+12V
GND
+5.5V
+5.5V
GND
GND
AC4.2V
AC4.2V
+44V
ST+5.7V
CTN
PROT.
PDN
+5VV
+5VV
-5VV
GND
GND
-12V
+12V
BD84
BD83
BD82
AC4.2V
AC4.2V
GND
+44V
ST+5.7V
N.C
PROT.
PDN
GND
GND
-12V
+12V
SMPS_CTL
DIMMER
FAN_H
FAN_H2
GND
GND
GND
GND
OSD-Y
OSD-CV
OSD-Y-CS
OSD-CV-CS
EXP/OSD-DA
EXP/OSD-CK
EXP-CS
AV3+Pr
GND
AV3+Pb
GND
AV3+Y
GND
AV3+S-C
GND
AV3+S-Y
GND
AV3+PIP
GND
AV3+COMP
GND

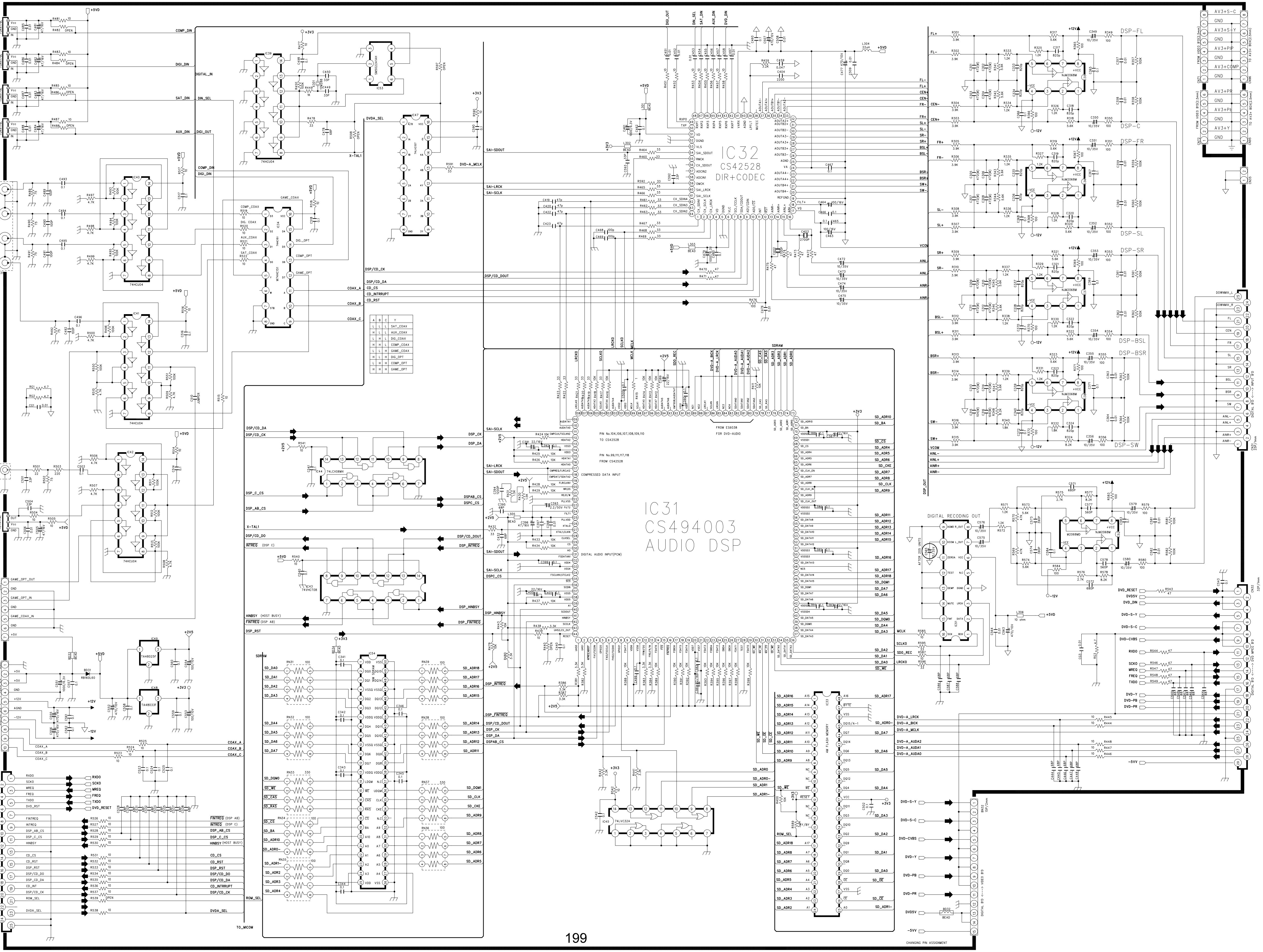
AMP BOARD #1


IC58
M62446FP
IC51 M2068MD
IC78 M4556AL
IC68 M2068MD
IC61 M2068MD
IC52 TC2001
IC62 TC2001
IC53 TP2150
IC63 TP2150
CN23
AMP BOARD <---> DSP BOARD
JW51
JK51
FRONT SPEAKERS
JK62
SUB WOOFER PRE-OUT
RL51 RELAY
RL61 RELAY
SUB_SPK
CEN_SPK
FAN_DET
SUM(L,R,C,S)
+VCC
-VEE
+12V
-12V
+5VP
SP_ON
PROTECT
AMP_MUTE
BUS1
CN89
CN11
BN91
AMP BOARD <---> FUNCTION BOARD
BBM = 40nS

AMP BOARD #2


+5VP
LS_VO
-12V
+12V
RS_VO
FUN_MUTE
AMP_MUTE
PROTECT
SP_ON
+5V
BRS_VIN
BLS_VIN
DATA2
CLK2
BACK_OFF
IC71 M2068MD
IC72
IC73 TP2150
IC81 M2068MD
IC82
IC83 TP2150
IC88 M62429FP
BLS-IN
BRS-IN
BLS-OUT
BRS-OUT
GND
DATA2 CLK2
Q711 D1304
Q712 D1304
Q730 C102
Q757 FQD5P10
Q761 FQPF13N10
Q762 FQPF13N10
Q763 FQPF13N10
Q764 FQPF13N10
Q778 C102
Q779 A102M
Q811 D1304
Q812 D1304
Q819 A102S
Q857 FQD5P10
Q861 FQPF13N10
Q862 FQPF13N10
Q863 FQPF13N10
Q864 FQPF13N10
Q888 C102
BD71 BEAD
BD72 BEAD
BD75 BEAD 6.0A
BD76 BEAD 6.0A
BD81 BEAD
BD82 BEAD
BD85 BEAD 6.0A
BD86 BEAD 6.0A
RL71 RELAY
RL81 RELAY
JK61
JK81
CEN/SL/SR SPEAKER
BACK SURROUND SPEAKERS
SUM(L.R.C.S)
FAN_DET
CEN_SPK
-VEE
+VCC
VPP
VNN
R817 JUMPER
L757 100uH
L765 18uH
L766 18uH
L857 100uH
L865 18uH
L866 18uH
D757 1SR159
D779 1SS355
D813 1SS355
D811 1SS355
D721 1SS355
D821 1SS355

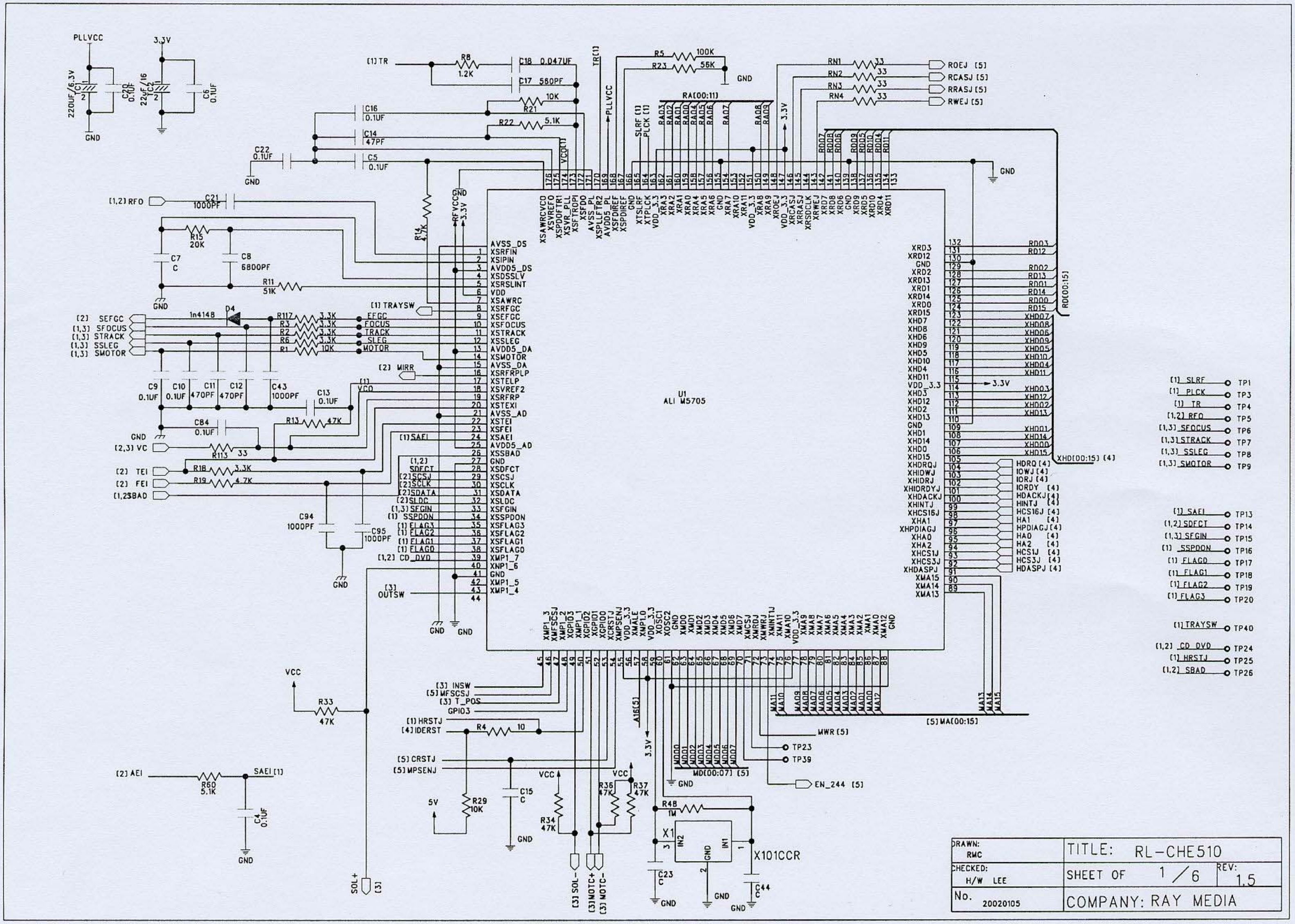
DIGITAL BOARD



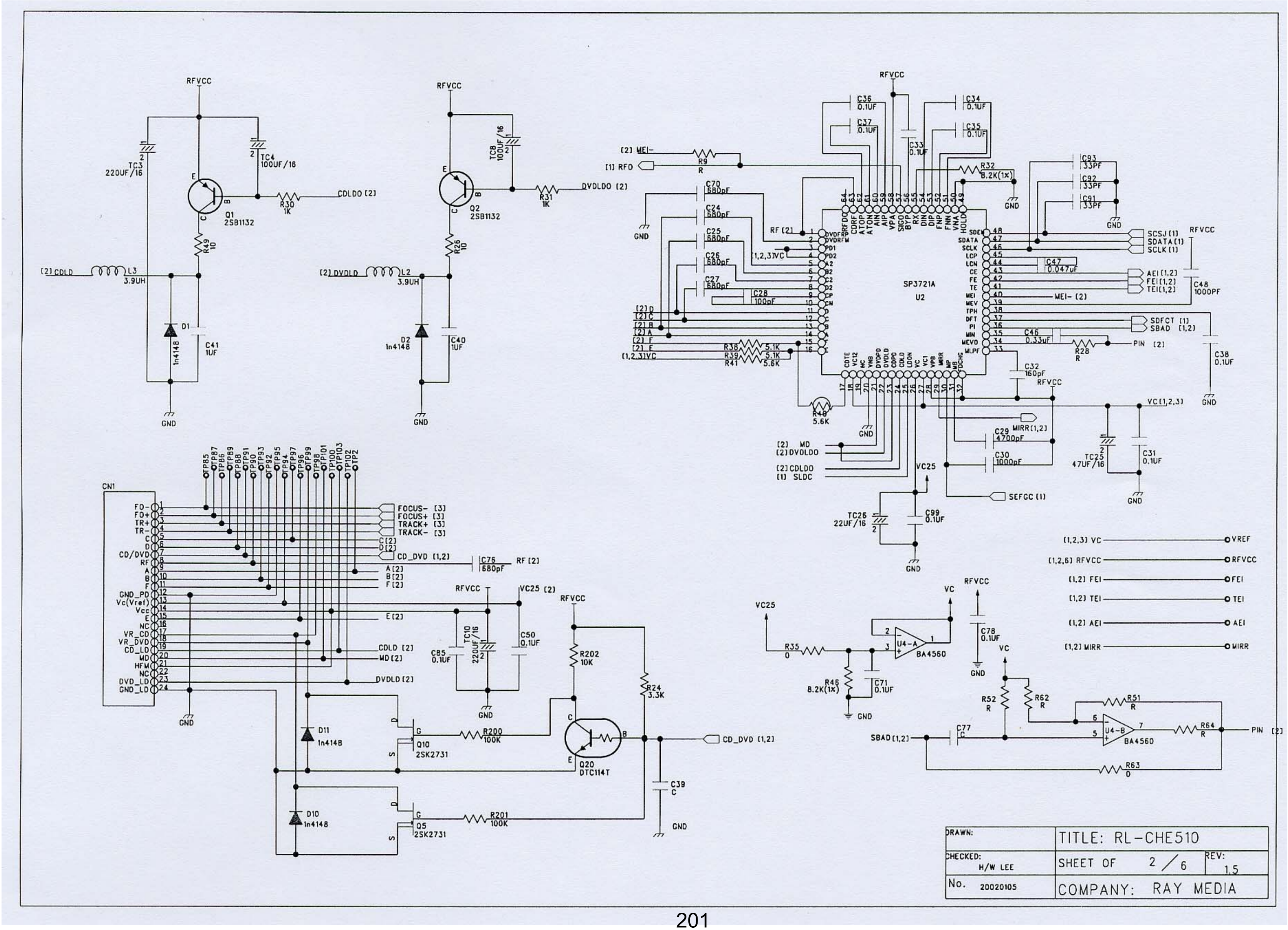
A	B	C	Y
L	L	L	SAT_COAX
H	L	L	AUX_COAX
L	H	L	DIG_COAX
H	H	L	COMP_COAX
L	L	H	GAME_COAX
H	L	H	DIG_OPT
L	H	H	COMP_OPT
H	H	H	GAME_OPT

DIGITAL IN
COMP-OPT
DIGI-OPT
SAT-OPT
AUX-OPT
DIGITAL IN
COMP-COAX
DIGI-COAX
AUX-COAX
SAT-COAX
AUX-COAXOUT
DIGITAL OUT
AUX-OPTOUT
IC32
CS42528
DIR+CODEC
IC31
CS494003
AUDIO DSP
74HCU04
74HC151
74LVC157
74LCX08MX
74VHCT08
74LVC32A
TA48025F
TA48033F
4M FLASH MEMORY
DIGITAL RECODING OUT
NJM2068M
DSP-FL
DSP-C
DSP-FR
DSP-SL
DSP-SR
DSP-BSL
DSP-BSR
DSP-SW
COMPRESSED DATA INPUT
DIGITAL AUDIO INPUT(PCM)
FROM ES6038 FOR DVD-AUDIO
PIN No.104,106,107,108,109,110 TO CS42528
PIN No.99,111,117,118 FROM CS42528
SDRAM
COAX_A
COAX_B
COAX_C
DSP/CD_CK
DSP/CD_DA
CD_CS
CD_INTRRUPT
CD_RST
DSP_RST
X-TAL1
DVDA_SEL
DVD-A_MCLK
SAI-SDOUT
SAI-LRCK
SAI-SCLK
DSP/CD_DOUT
DSP_INTREQ
DSP_HINBSY
DSP_FINTREQ
DSPAB_CS
DSPC_CS
TO_MICOM
ROM_SEL
DVD_RESET
DVD5V
DVD_DIN
DVD-S-Y
DVD-S-C
DVD-CVBS
RXDO
SCKO
MREQ
FREQ
TXDO
DVD-Y
DVD-PB
DVD-PR
DVD-A_LRCK
DVD-A_BICK
DVD-A_MCLK
DVD-A_AUDA2
DVD-A_AUDA1
DVD-A_AUDA0
-5VV
AV3+S-C
AV3+S-Y
AV3+PIP
AV3+COMP
AV3+PR
AV3+PB
AV3+Y
GND
FROM VIDEO B'D
TO AV3+ B'D
DIGITAL B'D <---> INPUT B'D
DIGITAL B'D <---> VIDEO B'D
DIGITAL B'D <---> DVD B'D
DIGITAL B'D <---> MPU B'D
GAME_OPT_OUT
GAME_OPT_IN
GAME_COAX_IN
+5VD
+3V3
+2V5
+12V
-12V
CHANGING PIN ASSIGNMENT

DVD LOADER (FRONT END) #1


PLLVCC
3.3V
220UF/6.3V
C1
C20 0.1UF
22uF/16
C2
C6 0.1UF
GND
[1] TR
R8 1.2K
C18 0.047UF
C17 560PF
10K
R21
C16 0.1UF
C14 47PF
R22 5.1K
C22 0.1UF
C5 0.1UF
TR[1]
PLLVCC
R5 100K
R23 56K
GND
RA[00:11]
SLRF [1]
PLCK [1]
3.3V
RN1 33
RN2 33
RN3 33
RN4 33
ROEJ [5]
RCASJ [5]
RRASJ [5]
RWEJ [5]
GND
[1,2] RFO
C21 1000PF
R15 20K
C7 C
C8 6800PF
R11 51K
R14 4.7K
RFVCC
3.3V
[2] SEFGC
[1,3] SFOCUS
[1,3] STRACK
[1,3] SSLEG
[1,3] SMOTOR
D4 1n4148
R117 3.3K
R3 3.3K
R2 3.3K
R6 3.3K
R1 10K
EFGC
FOCUS
TRACK
SLEG
MOTOR
[1] TRAYSW
[2] MIRR
[1] VCO
C9 0.1UF
C10 0.1UF
C11 470PF
C12 470PF
C43 1000PF
C13 0.1UF
R13 47K
C84 0.1UF
[2,3] VC
R113 33
[1] SAEI
[2] TEI
[2] FEI
[1,2] SBAD
R18 3.3K
R19 4.7K
C94 1000PF
C95 1000PF
[1,2] SDFCT
[2] SCSJ
[2] SCLK
[2] SDATA
[2] SLDC
[1,3] SFGIN
[1] SSPDON
[1] FLAG3
[1] FLAG2
[1] FLAG1
[1] FLAG0
[1,2] CD_DVD
[3] OUTSW
U1
ALI M5705
AVSS_DS
XSRFIN
XSIPIN
AVDD5_DS
XSDSSLV
XSRSLINT
VDD
XSAWRC
XSRFGC
XSEFGC
XSFOCUS
XSTRACK
XSSLEG
AVDD5_DA
XSMOTOR
AVSS_DA
XSRFRPLP
XSTELP
XSVREF2
XSRFRP
XSTEXI
AVSS_AD
XSTEI
XSFEI
XSAEI
AVDD5_AD
XSSBAD
GND
XSDFCT
XSCSJ
XSCLK
XSDATA
XSLDC
XSFGIN
XSSPDON
XSFLAG3
XSFLAG2
XSFLAG1
XSFLAG0
XMP1_7
XMP1_6
GND
XMP1_5
XMP1_4
XSAWRCVCO
XSVREFO
XSPDOFTR1
XSVR_PLL
XSFTROP1
XSFDO
AVSS_PL
XSPLLFTR2
AVDD5_PL
XSFDIREF
XSPDIREF
GND
XTSLRF
XTPLCK
VDD_3.3
XRA3
XRA2
XRA1
XRA0
XRA4
XRA5
XRA6
GND
XRA7
XRA10
XRA11
VDD_3.3
XRA8
XRA9
XROEJ
VDD_3.3
XRCASJ
XRRASJ
XRSDCLK
XRWEJ
XRD7
XRD8
XRD6
GND
XRD9
XRD5
XRD10
XRD4
XRD11
XRD3
XRD12
GND
XRD2
XRD13
XRD1
XRD14
XRD0
XRD15
XHD7
XHD8
XHD6
XHD9
XHD5
XHD10
XHD4
XHD11
VDD_3.3
XHD3
XHD12
XHD2
XHD13
GND
XHD1
XHD14
XHD0
XHD15
XHDRQJ
XHIOWJ
XHIORJ
XHIORDYJ
XHDACKJ
XHINTJ
XHCS16J
XHA1
XHPDIAGJ
XHA0
XHA2
XHCS1J
XHCS3J
XHDASPJ
XMA15
XMA14
XMA13
RD[00:15]
3.3V
XHD[00:15] [4]
HDRQ [4]
IOWJ [4]
IORJ [4]
IORDY [4]
HDACKJ [4]
HINTJ [4]
HCS16J [4]
HA1 [4]
HPDIAGJ [4]
HA0 [4]
HA2 [4]
HCS1J [4]
HCS3J [4]
HDASPJ [4]
XMP1_3
XMFSCSJ
XMP1_2
XGPIO3
XMP1_1
XGPIO2
XGPIO1
XGPIO0
XCRSTJ
XMPSENJ
VDD_3.3
XMALE
XMP1_0
VDD_3.3
XOSC1
XOSC2
GND
XMD0
XMD1
XMD2
XMD3
XMD4
XMD5
XMD6
XMD7
XMCSJ
XMRDJ
XMWRJ
XMINTJ
XMA11
VDD_3.3
XMA9
XMA8
XMA7
XMA6
XMA5
XMA4
XMA3
XMA2
XMA1
XMA0
XMA12
GND
GND
[5] MA[00:15]
MWR [5]
TP23
TP39
EN_244 [5]
MD[00:07] [5]
A16[5]
3.3V
VCC
R33 47K
[3] INSW
[5] MFSCSJ
[3] T_POS
GPIO3
[1] HRSTJ
[4] IDERST
R4 10
[5] CRSTJ
[5] MPSENJ
[2] AEI
R60 5.1K
SAEI [1]
C4 0.1UF
GND
5V
R29 10K
C15 C
GND
VCC
R34 47K
VCC
R36 47K
R37 47K
SOL+ [3]
[3] SOL-
[3] MOTC+
[3] MOTC-
R48 1M
X1
IN2
GND
IN1
X101CCR
C23 C
C44 C
GND
[1] SLRF TP1
[1] PLCK TP3
[1] TR TP4
[1,2] RFO TP5
[1,3] SFOCUS TP6
[1,3] STRACK TP7
[1,3] SSLEG TP8
[1,3] SMOTOR TP9
[1] SAEI TP13
[1,2] SDFCT TP14
[1,3] SFGIN TP15
[1] SSPDON TP16
[1] FLAG0 TP17
[1] FLAG1 TP18
[1] FLAG2 TP19
[1] FLAG3 TP20
[1] TRAYSW TP40
[1,2] CD_DVD TP24
[1] HRSTJ TP25
[1,2] SBAD TP26
DRAWN: RMC
CHECKED: H/W LEE
No. 20020105
TITLE: RL-CHE510
SHEET OF 1 / 6
REV: 1.5
COMPANY: RAY MEDIA

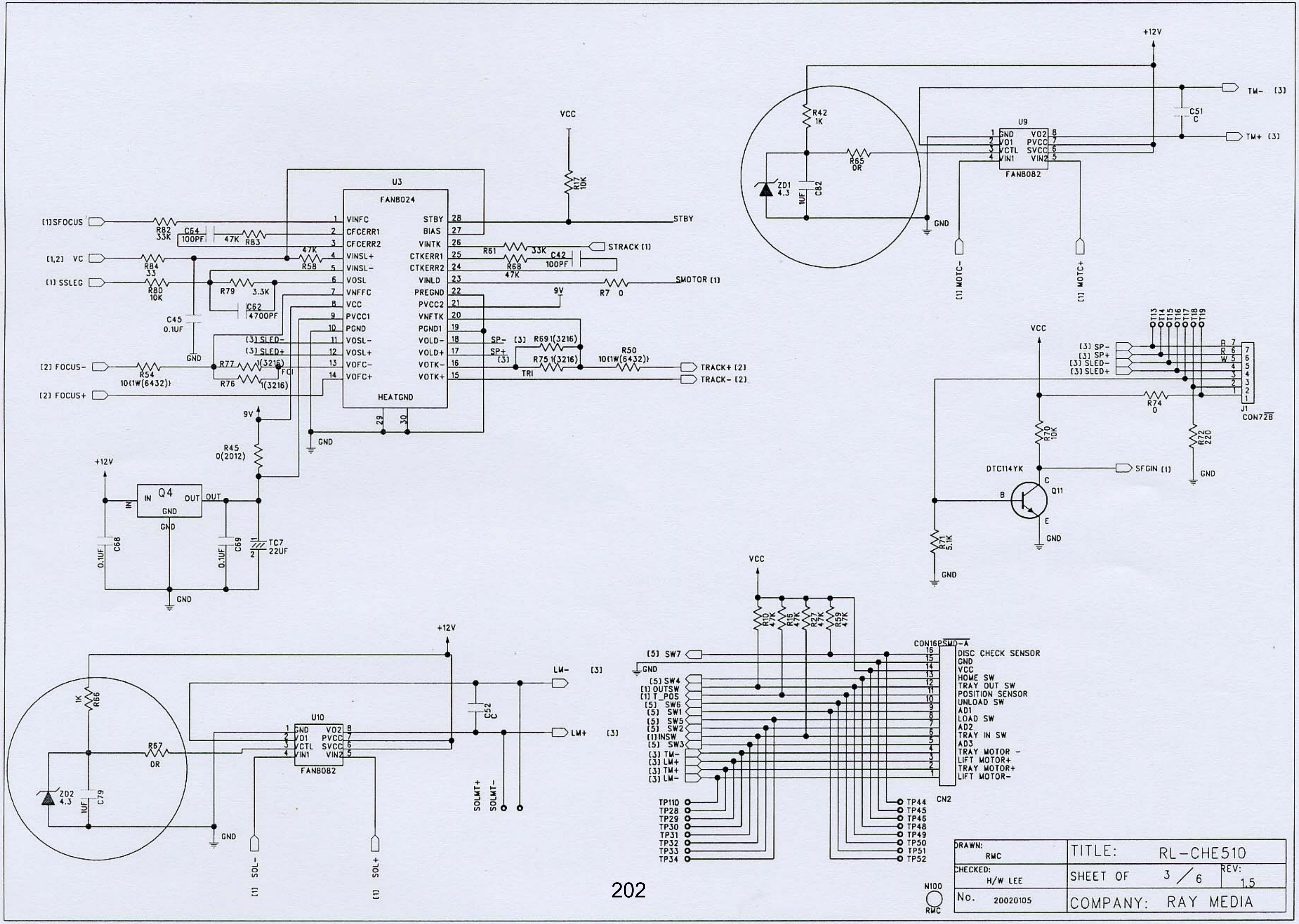
DVD LOADER (FRONT END) #2


RFVCC
TC3 220UF/16
TC4 100UF/16
Q1 2SB1132
R30 1K
CDLDO [2]
R49 10
[2] CDLD
L3 3.9UH
D1 1n4148
C41 1UF
GND
TC8 100UF/16
Q2 2SB1132
R31 1K
DVDLDO [2]
R26 10
[2] DVDLD
L2 3.9UH
D2 1n4148
C40 1UF
[2] MEI-
[1] RFO
R9 R
C36 0.1UF
C37 0.1UF
C33 0.1UF
C34 0.1UF
C35 0.1UF
R32 8.2K(1%)
C70 680pF
C24 680pF
C25 680pF
C26 680pF
C27 680pF
C28 100pF
RF [2]
[1,2,3]VC
[2] D
[2] C
[2] B
[2] A
[2] F
[2] E
R38 5.1K
R39 5.1K
R41 5.6K
R40 5.6K
SP3721A
U2
C93 33PF
C92 33PF
C91 33PF
SCSJ [1]
SDATA [1]
SCLK [1]
C47 0.047uF
AEI [1,2]
FEI [1,2]
TEI [1,2]
C48 1000PF
MEI- [2]
SDFCT [1]
SBAD [1,2]
C46 0.33uF
R28 R
PIN [2]
C38 0.1UF
C32 160pF
VC [1,2,3]
MIRR [1,2]
C29 4700pF
C30 1000pF
TC23 47UF/16
C31 0.1UF
[2] MD
[2] DVDLDO
[2] CDLDO
[1] SLDC
VC25
SEFGC [1]
TC26 22UF/16
C99 0.1UF
CN1
TP85 TP87 TP86 TP89 TP88 TP91 TP90 TP93 TP92 TP95 TP94 TP97 TP96 TP99 TP98 TP101 TP100 TP103 TP102 TP2
FO- FO+ TR+ TR- C D CD/DVD RF A B F GND_PD Vc(Vref) Vcc E NC VR_CD VR_DVD CD_LD MD HFM NC DVD_LD GND_LD
FOCUS- [3]
FOCUS+ [3]
TRACK+ [3]
TRACK- [3]
C [2]
D [2]
CD_DVD [1,2]
C76 680pF
RF [2]
A [2]
B [2]
F [2]
E [2]
CDLD [2]
MD [2]
DVDLD [2]
VC25 [2]
C85 0.1UF
TC10 220UF/16
C50 0.1UF
R202 10K
R24 3.3K
R200 100K
Q10 2SK2731
Q20 DTC114T
D11 1n4148
D10 1n4148
R201 100K
Q5 2SK2731
C39 C
CD_DVD [1,2]
VC25
VC
R35 0
U4-A BA4560
R46 8.2K(1%)
C71 0.1UF
C78 0.1UF
R52 R
R62 R
R51 R
SBAD [1,2]
C77 C
U4-B BA4560
R64 R
R63 0
PIN [2]
[1,2,3] VC — VREF
[1,2,6] RFVCC — RFVCC
[1,2] FEI — FEI
[1,2] TEI — TEI
[1,2] AEI — AEI
[1,2] MIRR — MIRR
DRAWN:
CHECKED: H/W LEE
No. 20020105
TITLE: RL-CHE510
SHEET OF 2 / 6
REV: 1.5
COMPANY: RAY MEDIA

DVD LOADER (FRONT END) #3

Cinemavision CVR700

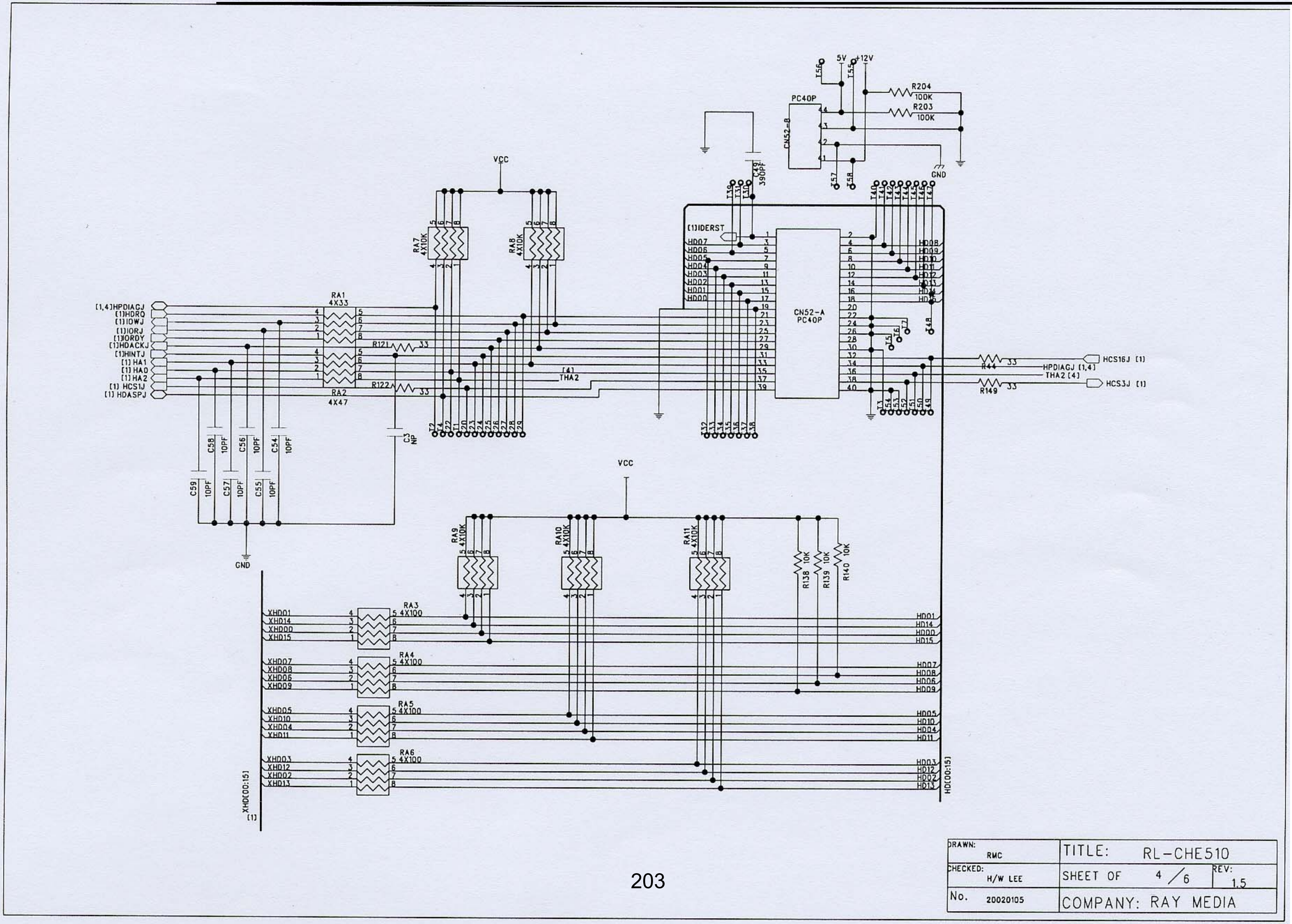
JBL



U3
FAN8024
VINFC
CFCERR1
CFCERR2
VINSL+
VINSL-
VOSL
VNFFC
VCC
PVCC1
PGND
VOSL-
VOSL+
VOFC-
VOFC+
STBY
BIAS
VINTK
CTKERR1
CTKERR2
VINLD
PREGND
PVCC2
VNFTK
PGND1
VOLD-
VOLD+
VOTK-
VOTK+
HEATGND
[1]SFOCUS
[1,2] VC
[1] SSLEG
[2] FOCUS-
[2] FOCUS+
R82 33K
C64 100PF
47K R83
R84 33
47K R58
R80 10K
R79 3.3K
C62 4700PF
C45 0.1UF
R77 1(3216)
R76 1(3216)
R54 10(1W(6432))
FCI
[3] SLED-
[3] SLED+
VCC
R17 10K
STBY
R61 33K
C42 100PF
R68 47K
STRACK [1]
SMOTOR [1]
R7 0
9V
SP- [3]
SP+ [3]
R69 1(3216)
R75 1(3216)
TRI
R50 10(1W(6432))
TRACK+ [2]
TRACK- [2]
GND
9V
R45 0(2012)
+12V
Q4
IN
OUT
C68 0.1UF
C69 0.1UF
TC7 22UF
R42 1K
R65 0R
ZD1 4.3
C82 1UF
U9
FAN8082
GND
VO1
VCTL
VIN1
VO2
PVCC
SVCC
VIN2
C51 C
TM- [3]
TM+ [3]
[1] MOTC-
[1] MOTC+
TP13
TP14
TP15
TP16
TP17
TP18
TP19
[3] SP-
[3] SP+
[3] SLED-
[3] SLED+
R74 0
J1 CON7ZB
R72 220
R70 10K
DTC114YK
Q11
SFGIN [1]
R71 5.1K
R66 1K
R67 0R
ZD2 4.3
C79 1UF
U10
FAN8082
C52 C
LM- [3]
LM+ [3]
SOLMT+
SOLMT-
[1] SOL-
[1] SOL+
R10 47K
R16 47K
R27 47K
R39 47K
CON16PSMD-A
[5] SW7
[5] SW4
[1] OUTSW
[1] T_POS
[5] SW6
[5] SW1
[5] SW5
[5] SW2
[1]INSW
[5] SW3
[3] TM-
[3] LM+
[3] TM+
[3] LM-
DISC CHECK SENSOR
GND
VCC
HOME SW
TRAY OUT SW
POSITION SENSOR
UNLOAD SW
AD1
LOAD SW
AD2
TRAY IN SW
AD3
TRAY MOTOR -
LIFT MOTOR+
TRAY MOTOR+
LIFT MOTOR-
CN2
TP110
TP28
TP29
TP30
TP31
TP32
TP33
TP34
TP44
TP45
TP46
TP48
TP49
TP50
TP51
TP52
N100
RMC
DRAWN: RMC
CHECKED: H/W LEE
No. 20020105
TITLE: RL-CHE510
SHEET 3 OF 6
REV: 1.5
COMPANY: RAY MEDIA

DVD LOADER (FRONT END) #4

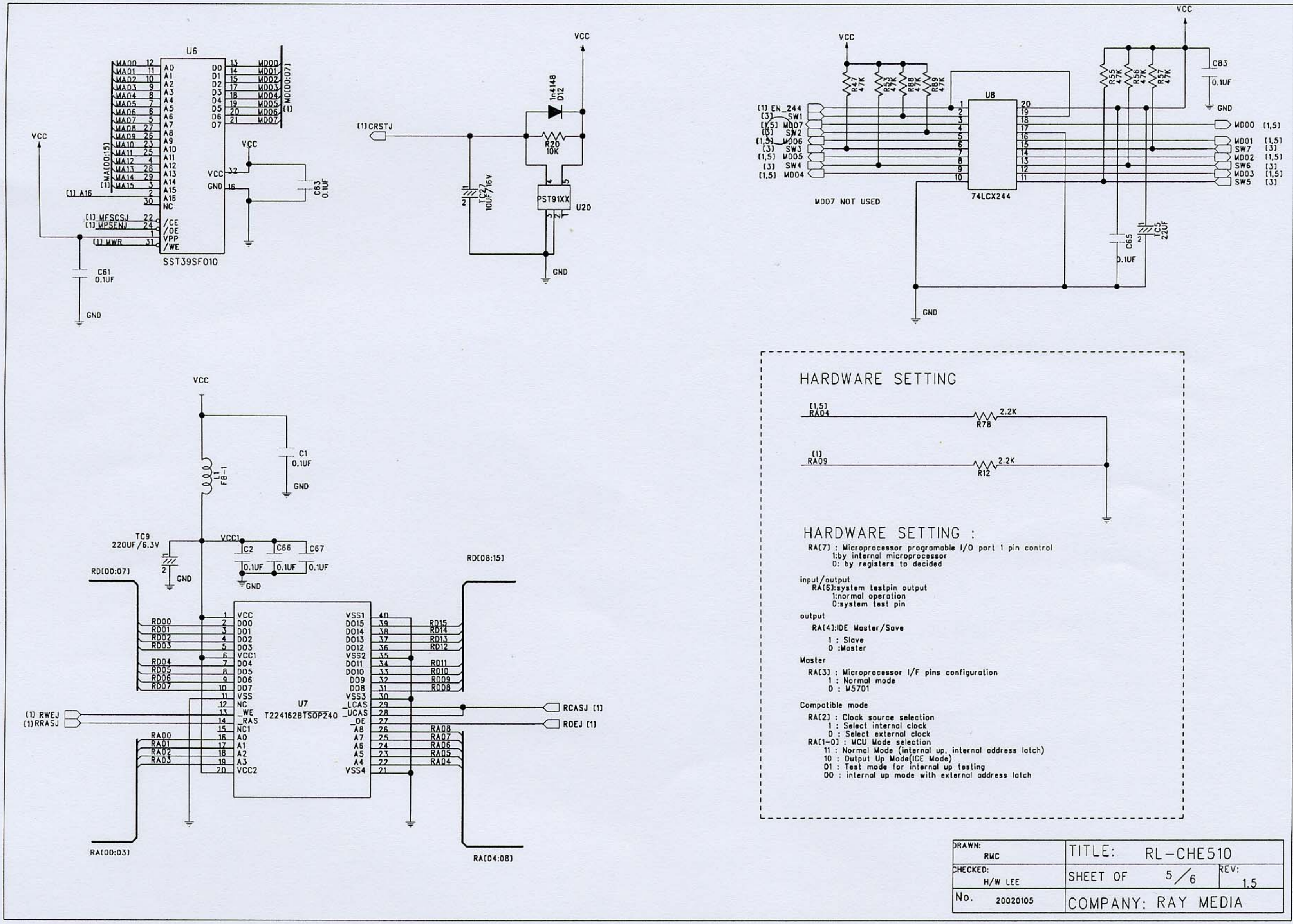
Cinemavision CVR700


VCC
RA7 4X10K
RA8 4X10K
RA1 4X33
RA2 4X47
R121 33
R122 33
C3 NP
[1,4]HPDIAGJ
[1]HDRQ
[1]IOWJ
[1]IORJ
[1]IORDY
[1]HDACKJ
[1]HINTJ
[1] HA1
[1] HA0
[1] HA2
[1] HCS1J
[1] HDASPJ
[4] THA2
C58 10PF
C56 10PF
C54 10PF
C59 10PF
C57 10PF
C55 10PF
GND
5V
+12V
T56
T55
R204 100K
R203 100K
PC40P
CN52-B
T57
T58
C19 390PF
T39 T11 T10
T40 T41 T42 T43 T44 T45 T46 T47
[1]IDERST
HD07 HD06 HD05 HD04 HD03 HD02 HD01 HD00
HD08 HD09 HD10 HD11 HD12 HD13 HD14 HD15
CN52-A PC40P
T5 T6 T7 T48
R44 33
R149 33
HCS16J [1]
HPDIAGJ [1,4]
THA2 [4]
HCS3J [1]
T3 T54 T53 T52 T51 T50 T49
T2 T4 T22 T1 T20 T23 T24 T25 T26 T27 T28 T29
T32 T33 T34 T35 T36 T37 T38
RA9 4X10K
RA10 4X10K
RA11 4X10K
R138 10K
R139 10K
R140 10K
RA3 4X100
RA4 4X100
RA5 4X100
RA6 4X100
XHD01 XHD14 XHD00 XHD15
XHD07 XHD08 XHD06 XHD09
XHD05 XHD10 XHD04 XHD11
XHD03 XHD12 XHD02 XHD13
HD01 HD14 HD00 HD15
HD07 HD08 HD06 HD09
HD05 HD10 HD04 HD11
HD03 HD12 HD02 HD13
XHD[00:15] [1]
HD[00:15]

DRAWN: RMC	TITLE: RL-CHE510		
CHECKED: H/W LEE	SHEET OF 4 / 6	REV: 1.5	
No. 20020105	COMPANY: RAY MEDIA		

DVD LOADER (FRONT END) #5

Cinemavision CVR700


U6
SST39SF010
MA00 MA01 MA02 MA03 MA04 MA05 MA06 MA07 MA08 MA09 MA10 MA11 MA12 MA13 MA14 MA15
MA[00:15]
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 A16 NC
D0 D1 D2 D3 D4 D5 D6 D7
MD00 MD01 MD02 MD03 MD04 MD05 MD06 MD07
MD[00:07] [1]
[1] A16
[1] MFSCSJ
[1] MPSENJ
[1] MWR
/CE /OE VPP /WE
VCC
GND
C63 0.1UF
C61 0.1UF
[1] CRSTJ
1n4148 D12
R20 10K
TC27 10UF/16V
PST91XX
U20
U8
74LCX244
[1] EN_244
[3] SW1
[1,5] MD07
[3] SW2
[1,5] MD06
[3] SW3
[1,5] MD05
[3] SW4
[1,5] MD04
MD07 NOT USED
R47 47K
R53 47K
R88 47K
R89 47K
R55 47K
R56 47K
R57 47K
C83 0.1UF
C65 0.1UF
TC5 22UF
MD00 [1,5]
MD01 [1,5]
SW7 [3]
MD02 [1,5]
SW6 [3]
MD03 [1,5]
SW5 [3]
HARDWARE SETTING
[1,5] RA04
R78 2.2K
[1] RA09
R12 2.2K
C1 0.1UF
L1 FB-1
TC9 220UF/6.3V
VCC1
C2 0.1UF
C66 0.1UF
C67 0.1UF
RD[00:07]
RD[08:15]
RD00 RD01 RD02 RD03 RD04 RD05 RD06 RD07
RD08 RD09 RD10 RD11 RD12 RD13 RD14 RD15
U7
T224162BTSOP240
VCC D00 D01 D02 D03 VCC1 D04 D05 D06 D07 VSS NC _WE _RAS NC1 A0 A1 A2 A3 VCC2
VSS1 D015 D014 D013 D012 VSS2 D011 D010 D09 D08 VSS3 _LCAS _UCAS _OE A8 A7 A6 A5 A4 VSS4
[1] RWEJ
[1] RRASJ
RCASJ [1]
ROEJ [1]
RA00 RA01 RA02 RA03
RA04 RA05 RA06 RA07 RA08
RA[00:03]
RA[04:08]

HARDWARE SETTING :

RA[7] : Microprocessor programable I/O port 1 pin control
1:by internal microprocessor
0: by registers to decided

input/output
RA[6]:system testpin output
1:normal operation
0:system test pin

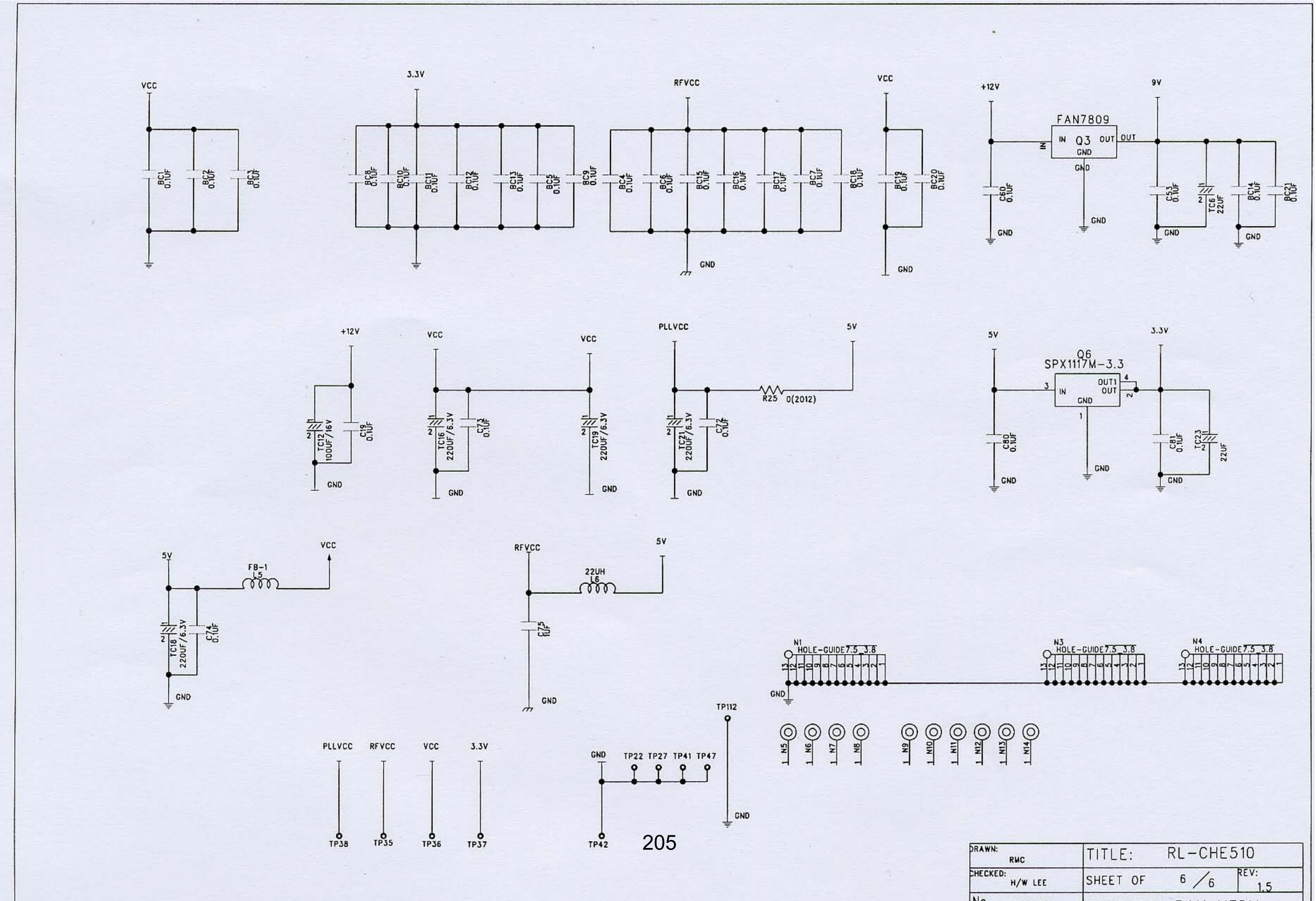
output
RA[4]:IDE Master/Save
1 : Slave
0 :Master

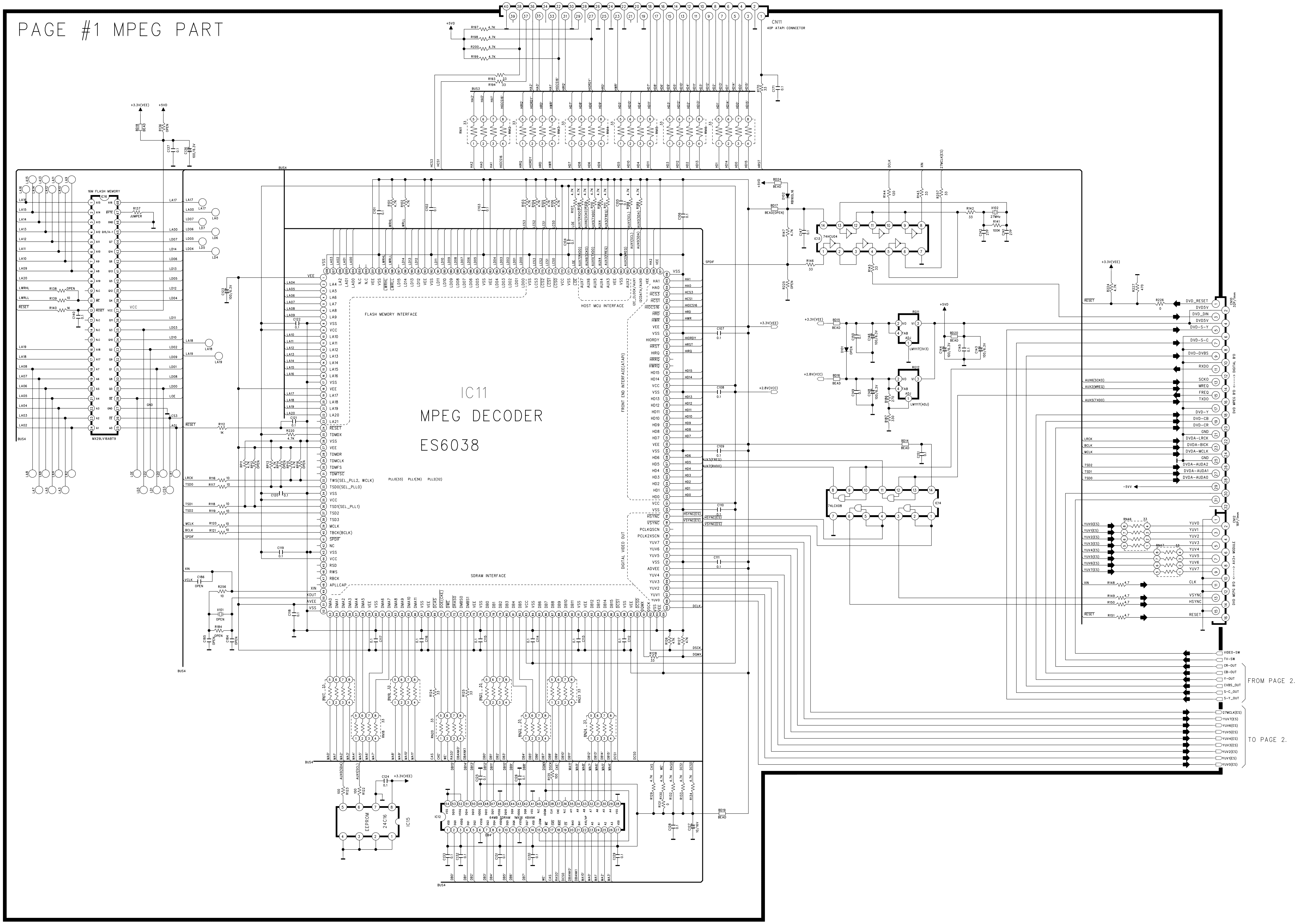
Master
RA[3] : Microprocessor I/F pins configuration
1 : Normal mode
0 : M5701

Compatible mode
RA[2] : Clock source selection
1 : Select internal clock
0 : Select external clock
RA[1-0] : MCU Mode selection
11 : Normal Mode (internal up, internal address latch)
10 : Output Up Mode(ICE Mode)
01 : Test mode for internal up testing
00 : internal up mode with external address latch

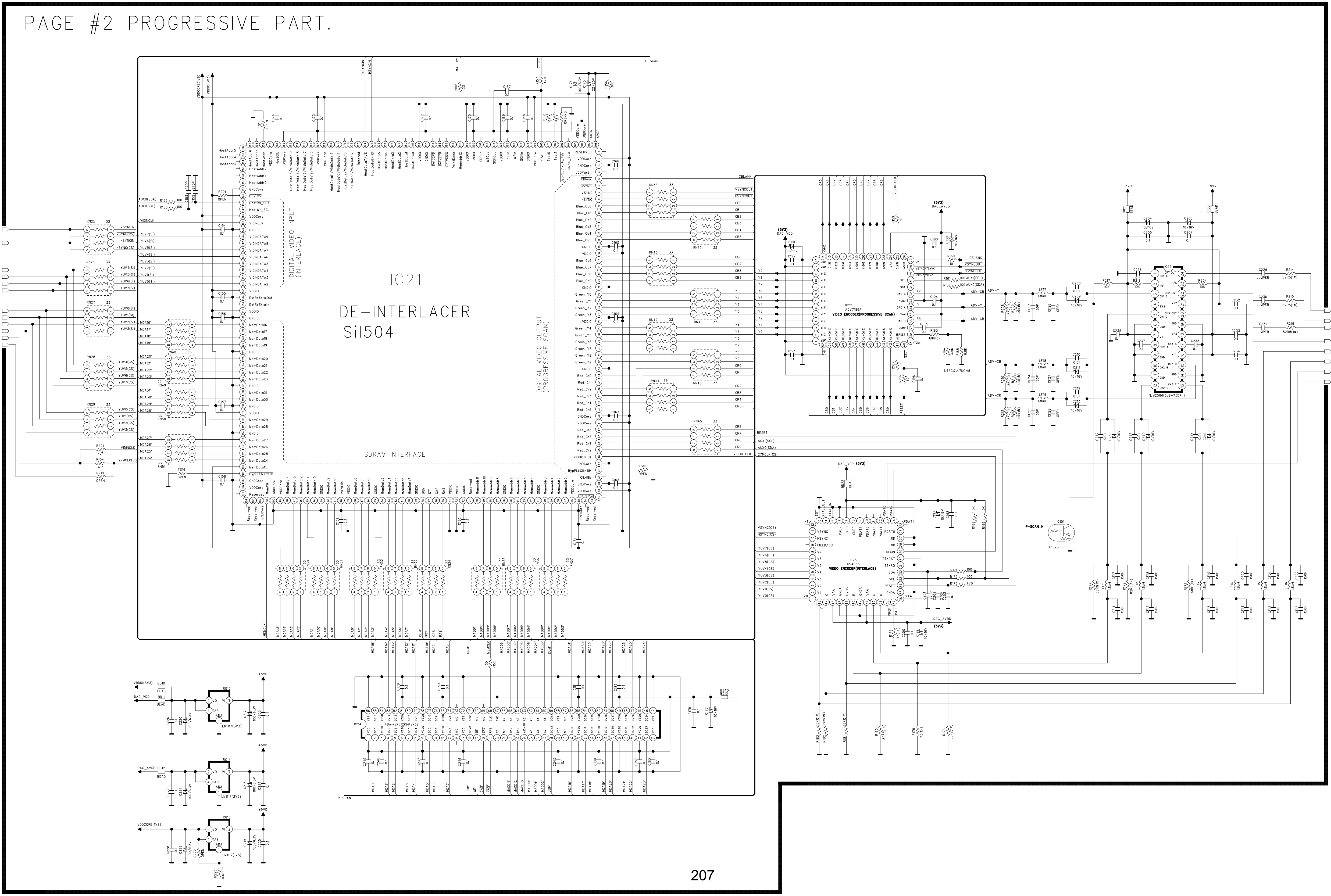
DRAWN: RMC
CHECKED: H/W LEE
No. 20020105
TITLE: RL-CHE510
SHEET OF 5/6
REV: 1.5
COMPANY: RAY MEDIA

DVD LOADER (FRONT END) #6

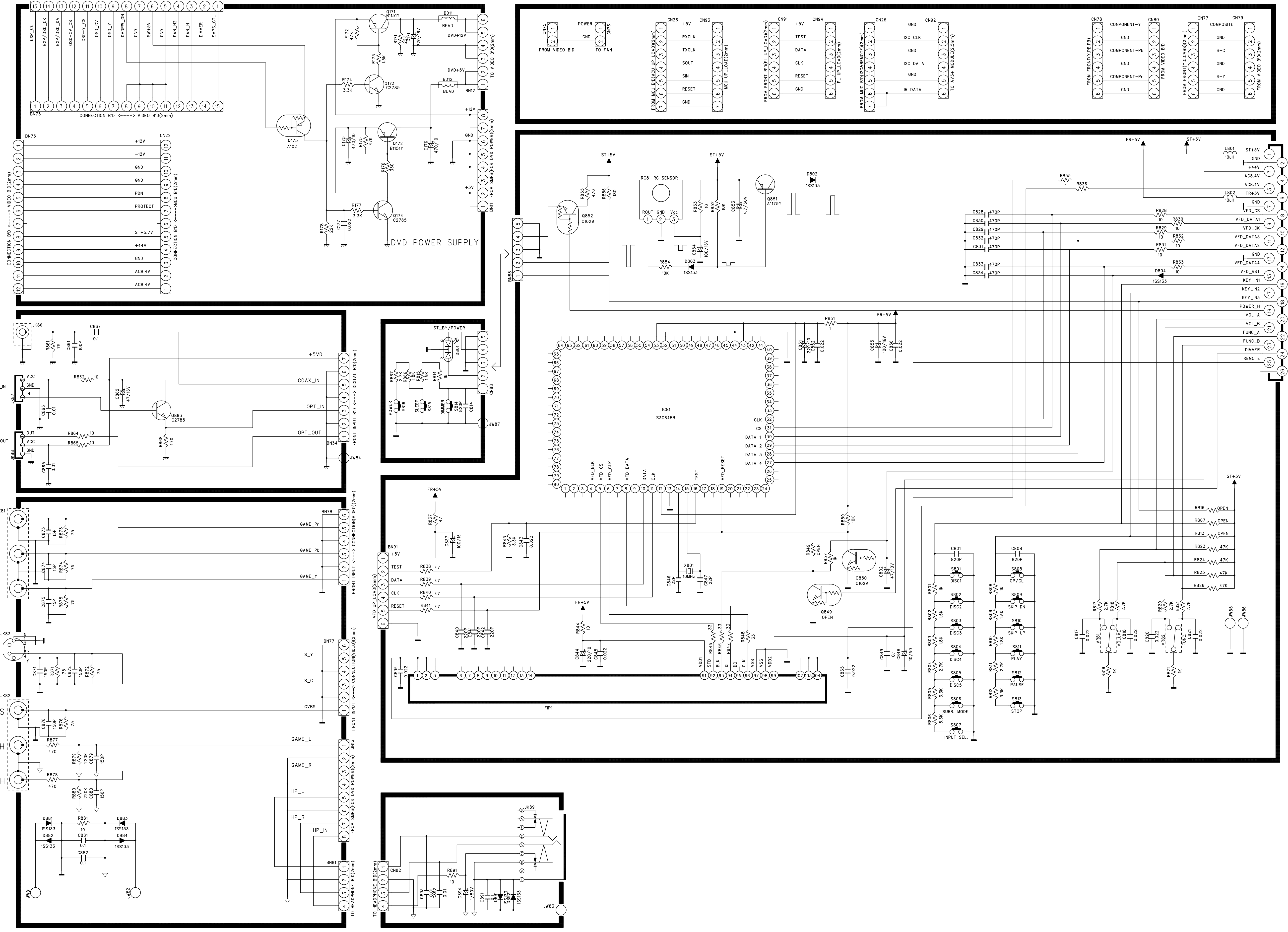

VCC
BC1 0.1UF
BC2 0.1UF
BC3 0.1UF
3.3V
BC8 0.1UF
BC10 0.1UF
BC11 0.1UF
BC12 0.1UF
BC13 0.1UF
BC5 0.1UF
BC9 0.1UF
RFVCC
BC4 0.1UF
BC6 0.1UF
BC15 0.1UF
BC16 0.1UF
BC17 0.1UF
BC7 0.1UF
BC18 0.1UF
GND
VCC
BC19 0.1UF
BC20 0.1UF
GND
+12V
FAN7809
IN
Q3
OUT
GND
C60 0.1UF
GND
9V
C53 0.1UF
TC6 22UF
BC14 0.1UF
BC21 0.1UF
GND
+12V
TC12 100UF/16V
C19 0.1UF
GND
VCC
TC16 220UF/6.3V
C73 0.1UF
GND
VCC
TC19 220UF/6.3V
GND
PLLVCC
TC21 220UF/6.3V
C72 0.1UF
R25 0(2012)
5V
GND
5V
Q6
SPX1117M-3.3
IN
OUT1
OUT
GND
C80 0.1UF
GND
3.3V
C81 0.1UF
TC23 22UF
GND
5V
F8-1
L5
VCC
TC18 220UF/6.3V
C74 0.1UF
GND
RFVCC
22UH
L6
5V
C75 1UF
GND
N1 HOLE-GUIDE7.5_3.8
N3 HOLE-GUIDE7.5_3.8
N4 HOLE-GUIDE7.5_3.8
GND
N5
N6
N7
N8
N9
N10
N11
N12
N13
N14
PLLVCC
RFVCC
VCC
3.3V
TP38
TP35
TP36
TP37
GND
TP22
TP27
TP41
TP47
TP112
GND
TP42
DRAWN: RMC
TITLE: RL-CHE510
CHECKED: H/W LEE
SHEET OF 6/6
REV: 1.5


PAGE #1 MPEG PART
CN11
40P ATAPI CONNECTOR
16M FLASH MEMORY
IC16
MX29LV160ABTS
IC11
MPEG DECODER
ES6038
FLASH MEMORY INTERFACE
HOST MCU INTERFACE
FRONT END INTERFACE(ATAPI)
DIGITAL VIDEO OUT
SDRAM INTERFACE
BUS3
BUS4
IC13
74HCU04
IC14
74LCX08
RG11
LM1117(3V3)
RG12
LM1117(ADJ)
X102
27MHz
EEPROM
24C16
IC15
IC12
64MB SDRAM 1Mx16 4BANK
+3.3V(VEE)
+5V0
+2.8V(VCC)
DVD_RESET
DVD5V
DVD_DIN
DVD-S-Y
DVD-S-C
DVD-DVBS
RXDO
SCKO
MREQ
FREQ
TXDO
DVD-Y
DVD-CB
DVD-CR
GND
DVDA-LRCK
DVDA-BICK
DVDA-MCLK
DVDA-AUDA2
DVDA-AUDA1
DVDA-AUDA0
-5VV
DVD MPEG B'D <---> DIGITAL B'D
YUV0
YUV1
YUV2
YUV3
YUV4
YUV5
YUV6
YUV7
CLK
VSYNC
HSYNC
RESET
DVD MPEG B'D <---> AV3+ MODULE
VIDEO-SW
TV-SW
CR-OUT
CB-OUT
Y-OUT
CVBS_OUT
S-C_OUT
S-Y_OUT
FROM PAGE 2.
27MCLK(ES)
YUV7(ES)
YUV6(ES)
YUV5(ES)
YUV4(ES)
YUV3(ES)
YUV2(ES)
YUV1(ES)
YUV0(ES)
TO PAGE 2.

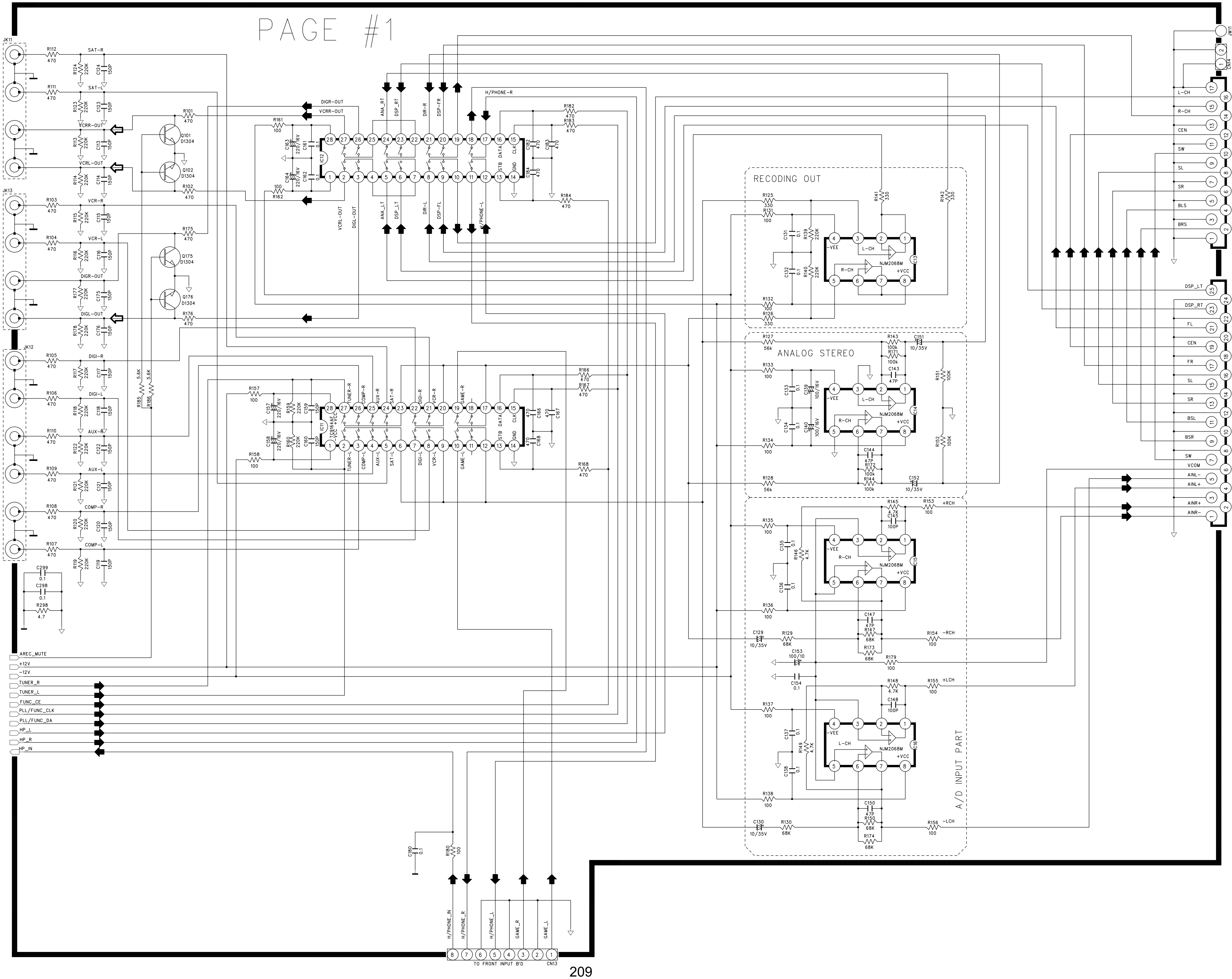
DVD MPEG BOARD #2


PAGE #2 PROGRESSIVE PART.
FROM PAGE 1
IC21
DE-INTERLACER
SiI504
DIGITAL VIDEO INPUT (INTERLACE)
DIGITAL VIDEO OUTPUT (PROGRESSIVE SCAN)
SDRAM INTERFACE
IC22
ADV7196A
VIDEO ENCODER(PROGRESSIVE SCAN)
IC23
CS4955
VIDEO ENCODER(INTERLACE)
IC24
IC25
NJM2586
Q101
P-SCAN_H
TO PAGE 1
Y-OUT
CB-OUT
CR-OUT
CVBS_OUT
S-C_OUT
S-Y_OUT
VIDEO-SW
TV-SW
LM1117(3V3)
LM1117(1V8)
VDDIO(3V3)
DAC_VDD
DAC_AVDD
VDDCORE(1V8)
+5VD
-5VV
P-SCAN

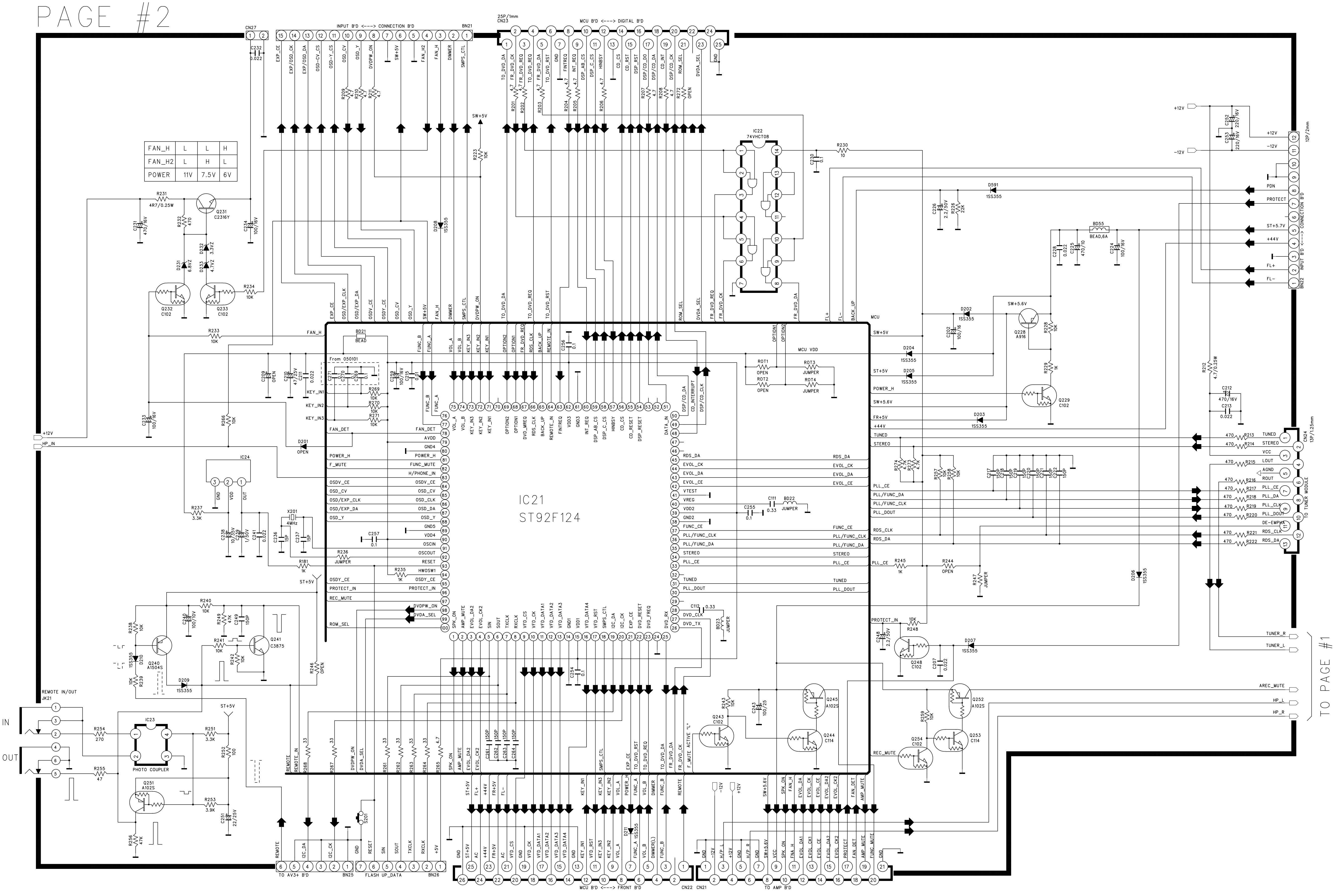
FRONT BOARD


CN21
CONNECTION B'D <----> MCU B'D(2mm)
EXP_CE
EXP/OSD_CK
EXP/OSD_DA
OSD-CV_CS
OSD_CV
OSD_Y
DVDPW_ON
GND
SW+5V
FAN_H2
FAN_H
DIMMER
SMPS_CTL
BN73
CONNECTION B'D <----> VIDEO B'D(2mm)
BN75
CN22
+12V
-12V
PDN
PROTECT
ST+5.7V
+44V
AC8.4V
CONNECTION B'D <----> VIDEO B'D(2mm)
CONNECTION B'D <---->MCU B'D(2mm)
Q171 B1151Y
Q173 C2785
Q175 A102
Q172 B1151Y
Q174 C2785
BD11 BEAD
BD12 BEAD
DVD+12V
DVD+5V
TO VIDEO B'D(2mm)
BN12
BN11
FROM SMPS(FOR DVD POWER)(2mm)
DVD POWER SUPPLY
CN75
POWER
FROM VIDEO B'D
CN76
TO FAN
CN26
CN93
RXCLK
TXCLK
SOUT
SIN
RESET
FROM MCU B'D(MCU UP_LOAD)(2mm)
MCU UP_LOAD(2mm)
CN91
CN94
TEST
DATA
CLK
FROM FRONT B'D(FL UP_LOAD)(2mm)
FL UP_LOAD(2mm)
CN25
CN92
I2C CLK
I2C DATA
IR DATA
FROM MUC B'D(I2C&REMOTE)(2mm)
TO AV3+ MODULE(2.5mm)
CN78
CN80
COMPONENT-Y
COMPONENT-Pb
COMPONENT-Pr
FROM FRONT(Y,PB,PB)
FROM VIDEO B'D
CN77
CN79
COMPOSITE
S-C
S-Y
FROM FRONT(Y,C,CVBS)(2mm)
FROM VIDEO B'D(2mm)
ST+5V
FR+5V
RC81 RC SENSOR
ROUT GND Vcc
Q852 C102M
Q851 A1175Y
D802 1SS133
D803 1SS133
D804 1SS133
BN88
CN83
L801 10uH
L802 10uH
VFD_CS
VFD_DATA1
VFD_CK
VFD_DATA3
VFD_DATA2
VFD_DATA4
VFD_RST
KEY_IN1
KEY_IN2
KEY_IN3
POWER_H
VOL_A
VOL_B
FUNC_A
FUNC_B
REMOTE
FRONT B'D <----> MCU B'D(DUAL 13P/2mm)
IC81
S3C848B
DATA 1
DATA 2
DATA 3
DATA 4
VFD_BLK
VFD_CS
VFD_CLK
VFD_DATA
VFD_RESET
ST_BY/POWER
D801
POWER S816
SLEEP S815
DIMMER S814
JW87
JK86
OPT_IN
OPT_OUT
JK87
JK88
Q863 C2785
+5VD
COAX_IN
FRONT INPUT B'D <----> DIGITAL B'D(2mm)
BN34
JW84
JK81
Pr
Pb
Y
BN78
GAME_Pr
GAME_Pb
GAME_Y
FRONT INPUT <----> CONNECTION(VIDEO)(2mm)
JK83
S_Y
S_C
CVBS
BN77
JK82
CVBS
L-CH
R-CH
GAME_L
GAME_R
HP_L
HP_R
HP_IN
BN13
FROM SMPS(FOR DVD POWER)(2mm)
D881 1SS133
D882 1SS133
D883 1SS133
D884 1SS133
JW81
JW82
BN81
TO HEADPHONE B'D(2mm)
BN91
VFD UP_LOAD(2mm)
X801 10MHz
Q850 C102M
Q849 OPEN
FIP1
VDD1
STB
BLK
DI
DO
CLK
VSS
VDD2
S801 DISC1
S802 DISC2
S803 DISC3
S804 DISC4
S805 DISC5
S806 SURR. MODE
S807 INPUT SEL.
S808 OP/CL
S809 SKIP DN
S810 SKIP UP
S811 PLAY
S812 PAUSE
S813 STOP
VR81 VOLUME
VR82 FUNC
JW85
JW86
JK89
CN82
TO HEADPHONE B'D(2mm)
JW83

MAIN BOARD (INPUT PART)

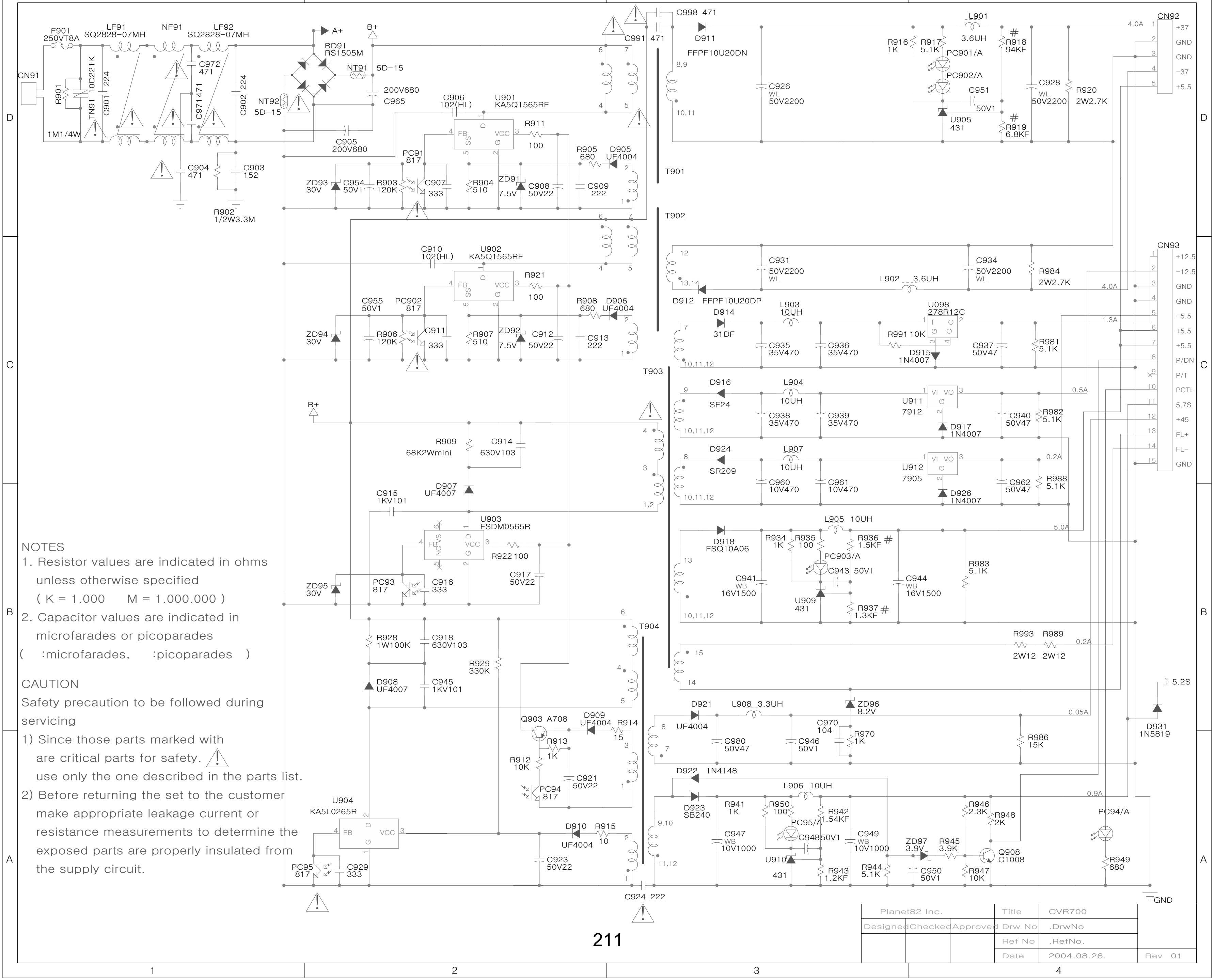

PAGE #1
CABLE/SAT
OUT
VCR
IN
OUT
DIGI. REC
IN
AUX
COMPUTER
JK11
JK13
JK12
SAT-R
SAT-L
VCRR-OUT
VCRL-OUT
VCR-R
VCR-L
DIGR-OUT
DIGL-OUT
DIGI-R
DIGI-L
AUX-R
AUX-L
COMP-R
COMP-L
Q101 D1304
Q102 D1304
Q175 D1304
Q176 D1304
IC12
IC11
ANA_RT
DSP_RT
DIR-R
DSP-FR
H/PHONE-R
ANA_LT
DSP_LT
DIR-L
DSP-FL
H/PHONE-L
VCRL-OUT
DIGL-OUT
TUNER-R
COMP-R
AUX-R
SAT-R
DIGI-R
VCR-R
GAME-R
TUNER-L
COMP-L
AUX-L
SAT-L
DIGI-L
VCR-L
GAME-L
STB
DATA
CLK
GND
RECODING OUT
ANALOG STEREO
A/D INPUT PART
NJM2068M
L-CH
R-CH
-VEE
+VCC
IC13
IC14
IC15
IC16
+RCH
-RCH
+LCH
-LCH
AREC_MUTE
+12V
-12V
TUNER_R
TUNER_L
FUNC_CE
PLL/FUNC_CLK
PLL/FUNC_DA
HP_L
HP_R
HP_IN
H/PHONE_IN
H/PHONE_R
H/PHONE_L
GAME_R
GAME_L
TO FRONT INPUT B'D
CN13
JW11
CN14
L-CH
R-CH
CEN
SW
SL
SR
BLS
BRS
INPUT B'D <--> AMP B'D
CN12
DSP_LT
DSP_RT
FL
CEN
FR
SL
SR
BSL
BSR
SW
VCOM
AINL-
AINL+
AINR+
AINR-
INPUT B'D <--> DIGITAL B'D
CN11

MAIN BOARD (MCU PART)


PAGE #2
CN27
INPUT B'D <----> CONNECTION B'D
BN21
25P/1mm
CN23
MCU B'D <----> DIGITAL B'D
IC22
74VHCT08
IC21
ST92F124
MCU
MCU VDD
IC24
IC23
PHOTO COUPLER
X201
4MHz
Q231
C2316Y
Q232
C102
Q233
C102
Q228
A916
Q229
C102
Q240
A1504S
Q241
C3875
Q243
C102
Q244
C114
Q245
A102S
Q248
C102
Q251
A102S
Q252
A102S
Q253
C114
Q254
C102
REMOTE IN/OUT
JK21
IN
OUT
12P/2mm
INPUT B'D <---> CONNECTION B'D
BN22
CN24
13P/1.25mm
TO TUNER MODULE
TO PAGE #1
TUNER_R
TUNER_L
AREC_MUTE
HP_L
HP_R
TO AV3+ B'D
BN25
FLASH UP_DATA
BN26
MCU B'D <----> FRONT B'D
CN22
CN21
TO AMP B'D
F_MUTE ACTIVE "L"
S201

FAN_H	L	L	H
FAN_H2	L	H	L
POWER	11V	7.5V	6V

SMPS BOARD


1
2
3
4
D
C
B
A
CN91
F901
250VT8A
LF91
SQ2828-07MH
NF91
LF92
SQ2828-07MH
R901
1M1/4W
TN91 10D221K
C901 224
C972
471
C971 471
C902 224
C904
471
C903
152
R902
1/2W3.3M
A+
B+
BD91
RS1505M
NT91
5D-15
NT92
5D-15
200V680
C965
C905
200V680
C906
102(HL)
U901
KA5Q1565RF
FB
SS
D
VCC
G
R911
100
PC91
817
ZD93
30V
C954
50V1
R903
120K
C907
333
R904
510
ZD91
7.5V
C908
50V22
R905
680
D905
UF4004
C909
222
T901
C998 471
C991 471
D911
FFPF10U20DN
8,9
10,11
C926
WL
50V2200
T902
C910
102(HL)
U902
KA5Q1565RF
R921
100
C955
50V1
PC902
817
ZD94
30V
R906
120K
C911
333
R907
510
ZD92
7.5V
C912
50V22
R908
680
D906
UF4004
C913
222
12
13,14
D912
FFPF10U20DP
C931
50V2200
WL
L902
3.6UH
C934
50V2200
WL
R984
2W2.7K
R916
1K
R917
5.1K
PC901/A
PC902/A
L901
3.6UH
R918
94KF
C951
50V1
U905
431
R919
6.8KF
C928
WL
50V2200
R920
2W2.7K
CN92
4.0A
+37
GND
GND
-37
+5.5
CN93
+12.5
-12.5
GND
GND
-5.5
+5.5
+5.5
P/DN
P/T
PCTL
5.7S
+45
FL+
FL-
GND
T903
D914
31DF
L903
10UH
C935
35V470
C936
35V470
U098
278R12C
R991 10K
D915
1N4007
C937
50V47
R981
5.1K
1.3A
D916
SF24
L904
10UH
C938
35V470
C939
35V470
U911
7912
VI
VO
D917
1N4007
C940
50V47
R982
5.1K
0.5A
D924
SR209
L907
10UH
C960
10V470
C961
10V470
U912
7905
D926
1N4007
C962
50V47
R988
5.1K
0.2A
10,11,12
B+
R909
68K2Wmini
C914
630V103
D907
UF4007
C915
1KV101
U903
FSDM0565R
NC
VS
R922 100
C917
50V22
ZD95
30V
PC93
817
C916
333
D918
FSQ10A06
L905 10UH
R934
1K
R935
100
R936
1.5KF
PC903/A
C943 50V1
C941
WB
16V1500
U909
431
R937
1.3KF
C944
WB
16V1500
R983
5.1K
5.0A
R993
2W12
R989
2W12
0.2A
15
14
T904
R928
1W100K
C918
630V103
R929
330K
D908
UF4007
C945
1KV101
Q903 A708
D909
UF4004
R914
15
R913
1K
R912
10K
C921
50V22
PC94
817
D921
UF4004
L908 3.3UH
ZD96
8.2V
C980
50V47
C970
104
C946
50V1
R970
1K
R986
15K
0.05A
5.2S
D931
1N5819
D922 1N4148
D923
SB240
L906 10UH
R941
1K
R950
100
R942
1.54KF
PC95/A
C948
50V1
C947
WB
10V1000
C949
WB
10V1000
U910
431
R943
1.2KF
R944
5.1K
ZD97
3.9V
R945
3.9K
C950
50V1
R946
2.3K
R948
2K
Q908
C1008
R947
10K
0.9A
PC94/A
R949
680
9,10
11,12
U904
KA5L0265R
PC95
817
C929
333
D910
UF4004
R915
10
C923
50V22
C924 222
GND

NOTES

1. Resistor values are indicated in ohms unless otherwise specified
   (K = 1.000 M = 1.000.000)
2. Capacitor values are indicated in microfarades or picoparades
   (:microfarades, :picoparades)

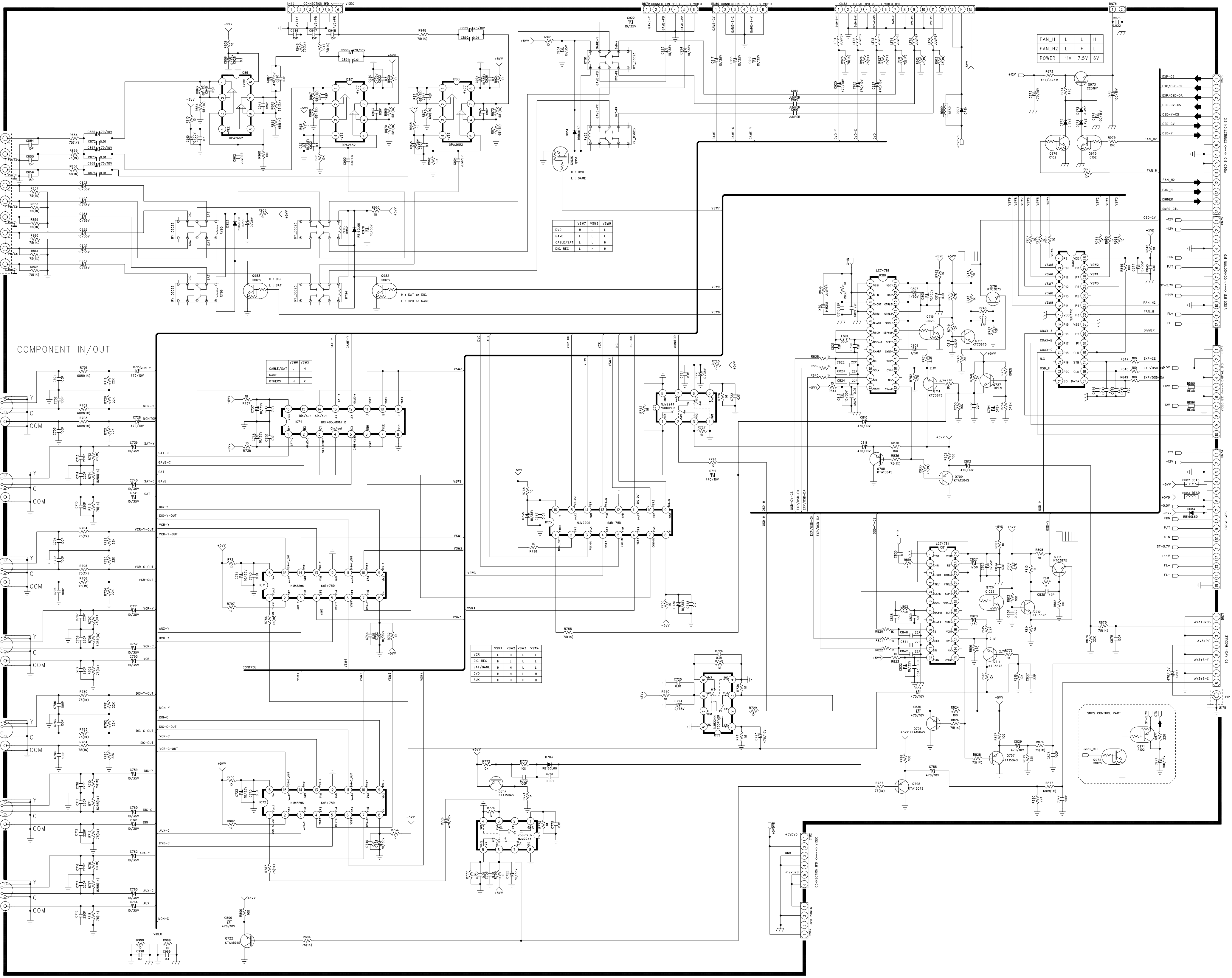
CAUTION

Safety precaution to be followed during servicing

1) Since those parts marked with ⚠ are critical parts for safety. use only the one described in the parts list.
2) Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

Planet82 Inc.			Title	CVR700
Designed	Checked	Approved	Drw No	.DrwNo
			Ref No	.RefNo.
			Date	2004.08.26. Rev 01

VIDEO BOARD

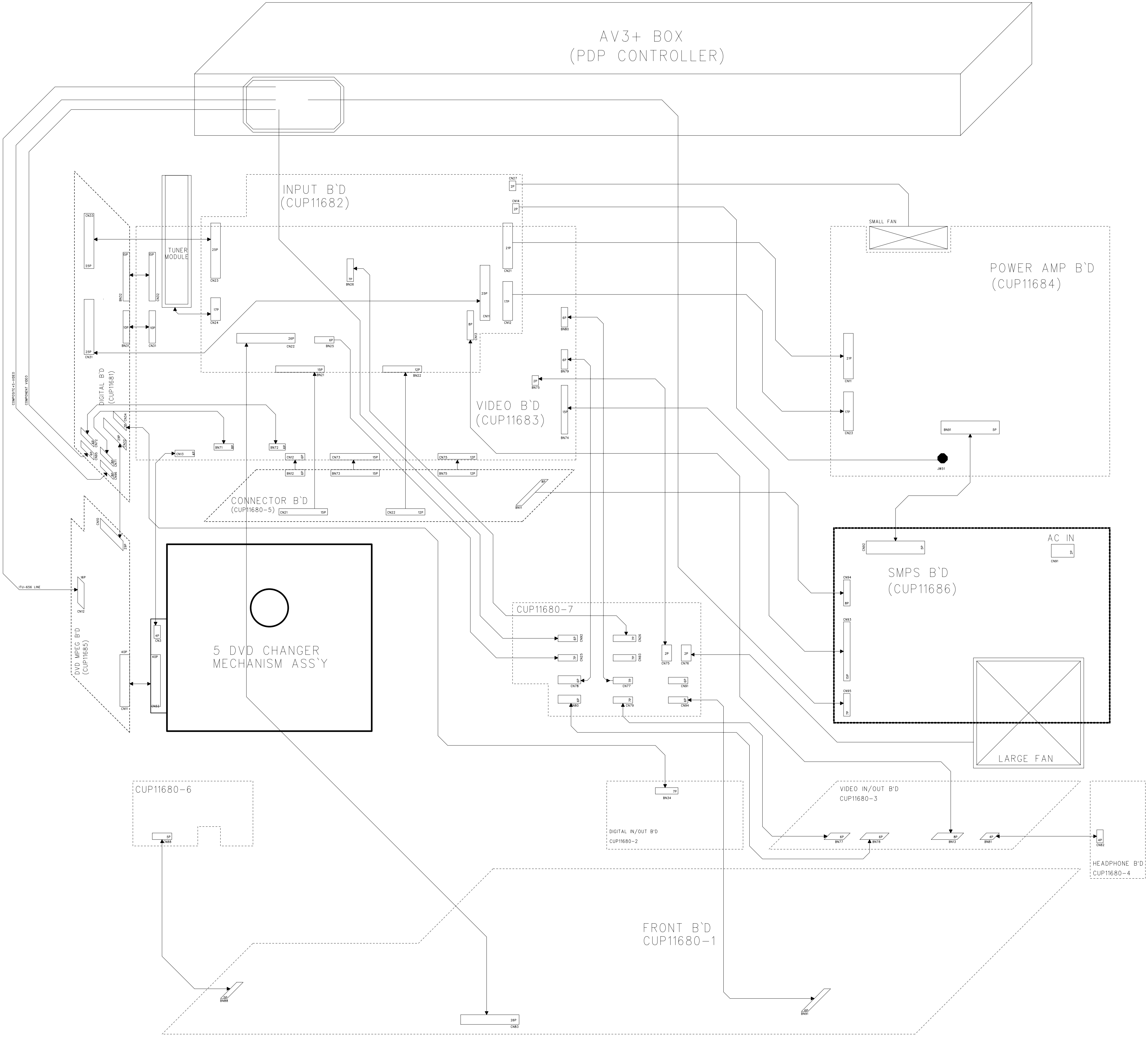

MONITOR
CABLE/SAT
DIGI. REC.
COMPONENT IN/OUT
MONITOR
CABLE/SAT
OUT
VCR
IN
OUT
DIGI.REC
IN
A/V AUX
Y
C
COM
OPA2652
HCF4053M013TR
NJM2296
NJM2244
LC74781
H : DVD
L : GAME
H : DIG.
L : SAT
H : SAT or DIG.
L : DVD or GAME
CONTROL
SMPS CONTROL PART
PIP IN
TO AV3+ MODULE
VIDEO B'D <----> CONNECTION B'D
VIDEO B'D <----> DIGITAL B'D
FROM SMPS
CONNECTION B'D <----> VIDEO
DVD POWER

FAN_H	L	L	H
FAN_H2	L	H	L
POWER	11V	7.5V	6V

	VSW7	VSW8	VSW9
DVD	H	L	L
GAME	L	L	L
CABLE/SAT	L	L	H
DIG. REC	L	H	H

	VSW6	VSW5
CABLE/SAT	L	H
GAME	L	L
OTHERS	H	X

	VSW1	VSW2	VSW3	VSW4
VCR	L	H	L	L
DIG. REC	H	L	L	L
SAT/GAME	H	H	L	L
DVD	H	H	L	H
AUX	H	H	H	H


AV3+ BOX
(PDP CONTROLLER)
INPUT B`D
(CUP11682)
TUNER MODULE
VIDEO B`D
(CUP11683)
DIGITAL B`D
(CUP11681)
COMPOSITE+S-VIDEO
COMPONENT VIDEO
CONNECTOR B`D
(CUP11680-5)
POWER AMP B`D
(CUP11684)
SMALL FAN
SMPS B`D
(CUP11686)
AC IN
LARGE FAN
DVD MPEG B`D
(CUP11685)
ITU-656 LINE
5 DVD CHANGER
MECHANISM ASS`Y
CUP11680-7
CUP11680-6
DIGITAL IN/OUT B`D
CUP11680-2
VIDEO IN/OUT B`D
CUP11680-3
HEADPHONE B`D
CUP11680-4
FRONT B`D
CUP11680-1
CN33
CN31
BN31
BN32
CN32
CN23
CN24
CN22
BN25
BN21
BN22
BN26
CN11
CN13
CN12
CN21
CN27
CN14
BN80
BN79
BN75
BN74
BN71
BN72
CN73
BN73
CN75
BN75
BN12
BN11
CN22
CN21
CN91
BN91
JW51
CN92
CN94
CN93
CN95
CN3
CN52
CN50
CN12
CN11
CN25
CN26
CN75
CN76
CN78
CN77
CN91
CN80
CN79
CN94
BN34
BN77
BN78
BN13
BN81
CN82
BN88
CN83
BN91
25P
17P
26P
21P
15P
12P
10P
8P
7P
6P
5P
4P
3P
2P
40P
16P